LITTELL'S LIVING AGE.—No. 290.—8 DECEMBER, 1849.

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1. *Rudimentary Electricity; being a concise Exposition of the General Principles of Electrical Science, and the Purposes to which it has been applied.* By Sir W. Snow Harris, F.R.S. London: 1848.
2. *Regulations of the Electric Telegraph Company.* London: 1849.
3. *Traité de Télégraphie Electrique, renfermant son Histoire, sa Théorie, et la Description des Appareils.* Par M. l'Abbé Moigno. Paris: 1849.

The curiosity of the British people, which the wonders of science have fed so profusely for the last fifty years, has latterly not only spread over a larger area as knowledge has diffused itself, and increased in intensity as it grew by what it fed on, but has also remarkably altered its direction. From the days of the Stuarts down to a comparatively recent period, the unscientific portion of the nation was chiefly interested by marvellous natural phenomena; and concerned itself little in even the most practical applications of the experimental sciences. In our own day a totally opposite feeling prevails. A worthy naval captain comes home to announce that he has seen a great sea-serpent. His account is scarcely published before it is depreciated, criticized, and derided, from one end of the island to the other. The "Gentlemen of England who sit at home at ease," may differ among themselves as to what the good captain did see, but are quite at one as to what he did not see. In the seventeenth century any number of sea-serpents would have been credited; and the bigger and more uncouth they were, so much the better. None, indeed, of the treasures of natural history which the British Museum can now exhibit, are half so strange as a Londoner could take his country cousin to in the times of the Commonwealth and the Restoration. Feathers could then be produced which had dropped from the tail of the Phœnix. Ostriches were to be seen which, unlike the birds of the present day, had not pecked their way into the world through an eggshell, but had been born alive. Bones were plentiful, of giants compared with whom Goliath was a dwarf. Petrified babies were not very rare; or solid thunderbolts, or unicorns' horns—or barnacles which had first been shell-fish, and then changed into Solan Geese! Our forefathers rejoiced for the most part in believing such things; and the few that were sceptical could only hazard a doubt. Credulity, however, never absorbs the entire man. It appears, on the contrary, to necessitate a countervailing scepticism. Credulity and scepticism, indeed, are two blind imps playing at see-saw. Neither sees his opposite—although each would be flung off if not counterbalanced by the other; and the arc which the one describes determines the space through which the other must travel. The terrified gazer at comets, and implicit believer in astrology, made himself amends, accordingly, by denouncing as a wizard the man who showed him the sun's spectrum on a wall, or the image of a tree turned upside down in a camera obscura; so that even the contemporaries of Newton thought it prudent to hide, under anagrams and verbal enigmas, their more striking discoveries from the vulgar observer. His faith was unlimited in one direction, and his intolerance in another; and he allowed each full play. To slay one's enemies was not only a lawful but honorable thing; to hang, draw, and quarter a traitor was the duty of a loyal subject; to shut up a man stricken with the plague, and leave him to his fate, was the most tender mercy which he could expect; but to dissect the dead body of foe, traitor, or plague-patient, was a crime against God and man! The credulous believer in a thousand imaginary natural and supernatural phenomena, unconsciously revenged himself for his credulity, by a fixed disbelief in man's power to conquer physical nature; and would not have stirred from his door to witness the most curious mechanical invention—or have wished it success, or expected good from it.

But these things have been long completely changed. The popular mind, like a magnet struck with lightning—which reverses its poles, so that it points to the south with the end which formerly pointed to the north—has been so electrified by the triumphs of experimental science, that it has whirled round like the disordered compass-needle; and what it formerly admired it now despises, and what it once despised it now admires. Had it been wise, it would have kept much of its old faith, (to which it will yet return,) and would have been content with adding to its previous beliefs whatever it found admirable in the youthful or regenerated sciences. But at present, when there seems no end to the achievements of experimental science, these achievements alone engross attention; and the public has not yet had time to count the cost, or grow weary of its new toy. It was not at all necessary, however, that botany or zoology should be thrown aside, because chemistry and electricity had recently abounded in wonders. A nettle or a limpet, the meanest weed or humblest insect, still more a nautilus or a humming-bird, is, after all, at least as curious a thing as gun-cotton or chloroform; and a torpedo or gymnotus is in reality a much more wonderful machine than a voltaic battery. Many-voiced, however, as the public is, it is not many-sided. It has latterly remorselessly narrowed its taste to a very few scientific subjects; and the present period

marks something like the culmination of a morbid relish for the exploits of applied physics. Supernaturalism is either entirely discredited, or reduced to a quite tangible realism, and subjected to manipulation—as in animal magnetism and phrenology. From chairs of chemistry, lectures are delivered on the nature of the soul; and the pupils of such a class, in a celebrated university, may be instructed one day as to the properties of magnesia or cream of tartar, and learn, on the next, that the burning kisses which passionate lovers exchange, are accompanied by actual flames, which the duly gifted may perceive hovering round their meeting lips! So strangely in our own day has the once invisible eagle, who dwelt near the sun, submitted to have his wings clipped, and taken his place among tame geese and barn-door fowls.

The natural history sciences, in short, although now of far greater interest to philosophers than they ever were before, have been completely eclipsed in general estimation by the experimental sciences. Travellers' tales have long been at a discount. The most distant places of the globe are now so near, in time, that it is worth no one's trouble to palm a deliberate fiction upon us as to their condition—when a few weeks at furthest may expose the fabrication. Every fortnight brings a mail from India and the New World; so that two weeks on an average bound the longevity of the most plausible imported lie. The public, needy as it was, waited with patience for exact information concerning the Californian gold; and its patience has been rewarded. It is still more willing to suspend its merely speculative curiosity till the mail shall arrive. We now hear little, accordingly, of marine or transmarine monsters; and the few that do present themselves are called to so strict an account by Professor Owen and his brethren, that if so much as a scale, a bristle, or a claw are out of order, it goes hard with them; and they are likely to be refused their certificates, like doubtful bankrupts. All this is well, and but wholesome discipline for the world of science. But the unscientific public has gone far beyond the most sceptical naturalist, in excluding from favor the once prized objects of natural history and phenomenal science. The only rare animals that have recently excited interest have been all, we think, of the human species—Red Indians, Bosjesmans, and Tom Thumb. Zoological gardens are everywhere in Great Britain struggling against extinction, and are indebted in many places to the humiliating assistance of fireworks or gymnastic exhibitions for their prolonged existence. How great the extremity is, may be gathered from the fact, that even the Zoological Society of London has gone the unusual length of prosecuting the defaulters among its members for their arrears. The same spirit appears in the loud outcry at present raised against the expenditure of public money on the palm-house at Kew—whilst thousands which no tax-gatherer demanded have been voluntarily flung away on hopeless projects which experimental physics were rashly supposed to sanction. Geology, except as a searcher for coal, metallic ores, limestone, or gold, is not the popular science it is often supposed to be. It is too difficult, comprehensive, and expensive a pursuit, to be largely followed by any but the highest grade of amateurs. The number of unscientific persons, accordingly, who realize to themselves, so that they can properly be said to believe, that coal was once wood, and ironstone once mud, and that there formerly lived on this earth such creatures as Pterodactyles or Icthyosaurs, is, in fact, very small. Unscientific religious people are still, to a great extent, ready to account for every fossil by Noah's deluge; and reluctant to make any creature older than Adam. The irreligious, semi-scientific public, on the other hand, reads eagerly whatever seems to contradict the book of Genesis; but understands too little of what it reads, and finds what little it understands too far removed from its everyday cares, hopes, and fears, to trouble itself much with the speculations of palæontology.

The oldest and grandest of the sciences fares no better. Although astronomy has recently been discovering planets at the rate at which she formerly discovered comets, and by her one gift to the known heavens, of Neptune, has cast far into the shade all the younger branches of knowledge, yet the public heard with perfect indifference the really idle, but for it, trustworthy announcement, that Neptune had gone a missing, or rather had never been found. Were it to be rumored, however, that the electric light had proved, or would prove on the large scale, a total failure, its extinction would be lamented as a public calamity; or had it been but hinted that the wires of the electric telegraph were found to be rapidly losing their power to conduct electricity, and would soon refuse to conduct it at all, the whole island would have taken fright.

In speaking thus, we must be understood as excluding from our reference not only all those who study science as science, and all those who study it professionally as the basis of art, but likewise all that large class of intelligent amateurs of both sexes, who cannot be divided by a sharp line of demarcation from the students of science, or art, among whom they are often amply entitled to take their places. But after deducting the philosopher, the professional man, and the amateur, there remains the great bulk of the people of all ranks, who only indirectly and occasionally interest themselves in science. They are very important, however, not only by their numerical preponderance, and as the raw material out of which the special students must be drafted, but likewise as filling the important offices in the community of treasurer, banker, and pursebearer—and as furnishing the supplies, without which neither science nor art, in many of their provinces, any more than war, can be carried on.

The sciences which the public, thus defined, at present crowds to popular lectures to hear expounded, are Natural Philosophy and Chemistry—though it would probably be more just to say

that the arts springing out of these sciences are popular, than that the sciences themselves are. The laws regulating the elasticity of steam at different temperatures, the theory of waves, the "Idea of Polarity," the doctrines of diamagnetism, of electromagnetics, of isomerism or organic types, and much else, find no favor with such disciples; but screw-propellers, electric lights, and new manures are cordially welcomed.

The preference thus shown for the sciences of Experiment, as contrasted with those of Observation, appears to admit of a twofold explanation. The former have always the charms of novelty about them; the latter have long been familiar to all. Among the sweetest remembrances, no doubt, of happy childhood, are the early listening at a mother's knee to the sacred record of the Creation; the appointment of the sun to rule the day, and the moon to rule the night; and Adam's giving names to the living creatures in the garden of Eden. Nor is there any toy more welcome to children than the well-freighted Dutch-built Noah's ark, nor any spectacle more delightful than a wild beast show, or a peep through a telescope at the man in the moon. But when childhood and youth are once gone by, natural history is but too often left behind with them; and the starry heavens are seldom consulted—except at the changes of the moon, when the roads are dark and the weather threatening.

A character of peacefulness, serenity, and unchangeableness, belongs to the phenomenal sciences; and is one of their charms for those who study them profoundly: and this indeed is more or less clearly perceived by all. The heavens upon which we gaze are felt to be the heavens to which the first pair lifted their eyes in Paradise. The plants and animals we now see are not distinguishable from those which the Egyptian draughtsman made his designs from, or the Greek artist carved on his relievos. But this thought, so soothing in some moods of mind, is out of keeping with the turbulent activity of busy manhood—especially as it occupies itself in our own country at present. Man's newest planet is probably heaven's oldest one. The last discovered flower has been growing for any one to pluck, since the flood; and kangaroos were in New Holland before Britons were in Great Britain. An air of majestic antiquity and completeness belongs almost exclusively to the phenomenal sciences. But even this makes them less attractive to a generation living more in the future than the past. In addition too, to the great charm novelty, the idea of Power is much more connected by the people with the experimental than the phenomenal sciences. The experimental sciences have in truth, within this century, effected so vast a revolution in the political, commercial, and social relations of the world, that men do not now know what next to dread, or to expect, from them. The natural history and phenomenal sciences, on the other hand, have not very visibly affected the recent progress of mankind. The services of geology in discovering valuable minerals, of zoology in pointing out the localities of valuable fisheries, and of botany in introducing new vegetables, have been unobtrusively rendered; and have not come before the public in such a way as either to startle and be wondered at, or even to be understood or appreciated. Mechanics is applauded indeed for its steam-ships; but geology is not thanked for discovering, in Labuan, Chili, Australia, Vancouver's Island, and elsewhere, the coals, without which the ocean steamers could never have ventured on their stupendous careers. Chemistry has the whole credit of introducing guano; the fertilizing virtues of which had, however, been indicated by natural history long before chemistry had subjected it to analysis.

This habitual application of an *utilitarian test* to the sciences has necessarily excluded from attention some of the noblest of them. What was the planet Neptune to the utilitarian public, or that public to Neptune? His appearance in the heavens did not lead to any reduction in the window tax, or to any saving in candles. The skies looked no brighter for his coming, and the street lamps were as needful as before. The sea-serpent comes home to no man's business, and we trust will come home to no man's bosom. But the gunpowder-makers naturally enough quailed at the report of gun-cotton; and Sir Walter Scott's famous stage-coach companion, who, silent on every subject suggested for conversation, exclaimed at last, "Tak me on bend leather, and I 'm your man!" would, if now alive, have taken interest in at least one additional topic, and have woke up at the sound of "gutta percha soles." The shareholders in the gas companies go about anxiously inquiring concerning the electric light; and coal merchants look blank at a recent newspaper paragraph which announces a method of producing an inflammable vapor from resin, charcoal, and water.

In all this, however, there is nothing surprising, and not much to be lamented. The scientific discoveries of recent years, and their marvellous applications in the arts, have been of such a nature and magnitude, as to astonish the most sober philosophers; so that we cannot wonder that they have filled the less reflecting public with extravagant hopes and fears. We are far from wishing to impute to the mass of the people a merely selfish or sordid interest in applied science. The least avaricious may well take alarm, at the prospect of a single unlucky invention ruining his trade or profession; and in a densely peopled country like this, enterprising young men, unpossessed of capital, naturally entertain sanguine expectations as to the substantial gains and honorable independence which may accrue to them from one successful investigation or ingenious device. But apart altogether from the perception of a pecuniary interest in the progress of discovery, every newspaper reader, however unscientific, perceives that the world is moving onwards at an accelerated rate—which, according to his temperament, exceedingly delights or exceedingly alarms him. Intelligent appreciation, in short, childish fear, childish wonder, a feverish spirit of speculation, and a strong

infusion of cupidity, are all strangely mingled in the popular estimate of what the sciences are destined to effect for the world. The general faith in science as a wonder-worker is at present unlimited; and along with this there is cherished the conviction that every discovery and invention admits of a practical application to the welfare of men. Is a new vegetable product brought to this country from abroad, or a new chemical compound discovered, or a novel physical phenomenon recorded! The question is immediately asked, *cui bono?* What is it good for? Is food or drink to be got out of it? Will it make hats, or shoes, or cover umbrellas? Will it kill or heal? Will it drive a steam-engine, or make a mill go? And truly this *cui bono* question has of late been so often satisfactorily answered, that we cannot wonder that the public should persist in putting it, somewhat eagerly, to every discoverer and inventor, and should believe that if a substance has one valuable application, it will prove, if further investigated, to have a thousand. Gutta percha has not been known in this country ten years; and already it would be more difficult to say what purposes it has not been applied to, than to enumerate those to which it has been applied. Gun-cotton had scarcely proved in the saddest way its power to kill, before certain ingenious Americans showed that it has a remarkable power of healing, and forms the best sticking plaster for wounds. Surgeons have not employed ether and chloroform as anæsthetics for three years; and already an ether steam-engine is at work in Lyons, and a chloroform engine in London. Polarization of light, as a branch of science, is the enigma of enigmas to the public. What it is, is a small matter; but what work it can perform is a great one. It must turn to some use. The singularly ingenious Wheatstone, accordingly, has already partly satisfied the public by making polarized light act as a time-keeper, and has supplied us with a sky-polariscope; a substitute for a sun-dial, but greatly superior to it in usefulness and accuracy. Of other sciences we need scarcely speak. Chemistry has long come down from her atomic altitudes and elective affinities, and now scours and dyes, brews, bakes, cooks, and compounds drugs and manures, with contented composure. Electricity leaves her thunderbolt in the sky, and like Mercury dismissed from Olympus, acts as letter-carrier and message-boy. Even the mysterious magnetism—which once seemed like a living principle to quiver in the compass-needle, is unclothed of mystery, and set to drive turning lathes. The public perceives all this, and has unlimited faith in man's power to conquer nature. The credulity which formerly fed upon unicorns, phœnixes, mermaids, vampires, krakens, pestilential comets, fairies, ghosts, witches, spectres, charms, curses, universal remedies, pactions with Satan, and the like, now tampers with chemistry, electricity, and magnetism, as it once did with the invisible world. Shoes of swiftness, seven league boots, and Fortunatus' wishing caps, are banished even from the nursery; but an electro-magnetic steam fire-balloon, which will cleave the air like a thunderbolt, and go straight to its destination as the crow flies, is an invention which many hope to see realized, before railways are quite worn to pieces. We may soon expect, too, it seems, to shoot our natural enemies with saw-dust fired from guns of the long range pointed at the proper angle, as settled by the astronomer-royal; which will enable the Woolwich artillerymen (who will hereafter be recruited from the blind asylums) to bombard Canton, or wherever else the natural enemy is, and save the necessity of sending troops to the colonies. A snuff-box full of the new manure, about to be patented, will fertilize a field; and the same amount of the new explosive will dismantle the fortifications of Paris. By means of the fish-tail propeller to be shortly laid before the Admiralty, the Atlantic will be crossed in three days.

Dreams little less extravagant than these are floating through the brain of many at the present day; not so sharply defined, perhaps, as we have here laid them down, for then their visionary character would be detected; but sufficiently distinct to fill the dreamers with a feverish anticipation of what the future is to effect. We think it well, therefore, to tell the public betimes, that it is a little crazed at present on the subject of applied science, and must learn to moderate its expectations; otherwise, after some additional disappointments, destruction of life, property, and capital, a reäction will assuredly come—which, alike for the sake of the scientific and unscientific sections of the public, we should greatly deplore. For, to the unthinking faith of the people, and the instinctively sagacious empiricism of the unscientific and semi-scientific, we are substantially indebted for many of the most precious gifts of modern science. These gifts are, no doubt, the true children of science; but, like the ostrich, *she* would have left them in the sand. They have to a great extent been nursed and developed into their energetic manhood by other than parental hands. Without science we should not have had our lighthouses, railways, locomotive engines, ocean steamers, or telegraphs; but it needed something more than science to secure their speedy realization. Had not blind faith put her hand into her pocket, and become shareholder and banker, science must have wanted the black-board and chalk of actual trial, with which alone the necessary problems could be solved. An unhesitating empiricism stopped its ears, when it was told by the oracles of science that no steam-ship could possibly cross the Atlantic—and incontinently freighted goods for New York—which were duly delivered! It was laid down, with equal authority, that railways must go as nearly as possible in straight lines and on dead levels; but empiricism would not read the statute—and railroads now meander safely in winding curves, and up and down most formidable slopes. It is the combination, in short, of rigid, cautious, hesitating science, with bold, sagacious, and often reckless empiricism, that has made the Anglo-Saxon races in the old and

new world, excel all other modern people as conquerors of physical nature.

We select one of their recent achievements, in which, however, other races than the Anglo-Saxon have a large share, for present notice—namely, the Electric Telegraph.

In what follows we shall not attempt a minute description of the entire machinery of the telegraph, but confine ourselves to an explanation of what is essential to it as an electrical contrivance. A full description of it has not yet appeared in our language. A treatise, however, is announced as in the press, "On Electricity; its Theory, and practical Application," from the pen of M. de la Rive, the eminent philosopher of Geneva; and a special work on the telegraph is understood to be in preparation by one of our own electricians. Meanwhile, an excellent description of the general principles of the telegraph, and the mode in which these have been carried out in practice, will be found in Mr. Charles Knight's "Companion to the British Almanac for 1843 and 1848," and in the *Révue des deux Mondes* of August last. We are indebted, however, to a French author for the only systematic treatise we possess, as yet, on the subject. The Abbé Moigno's work on Electric Telegraphy has much of the well-ordered method and admirable perspicuity which characterize the scientific writings of his countrymen; and he displays, in the execution of his task, more than their ordinary vivacity in discussing questions of physics. His work is, in consequence, as lively and entertaining as it is instructive; and is peculiarly valuable for its ample discussion of the relative merits of the different eminent men who have contributed to the perfection of the telegraph. This discussion carries the author over delicate ground (which we shall altogether avoid); for the majority of the inventors and improvers of the electric telegraph are still living, and claims of priority have been keenly contested among them. We must do the abbé the justice to say that, in disposing of these claims, he has shown a praiseworthy impartiality, and, in particular, a liberality towards the English electricians, especially Wheatstone, such as we do not find every day in French historical or polemical works. He is a little hard, in the body of his treatise, upon Professor Morse, of America, whom he accuses of claiming too much; adding, by way of justification alike of the professor and of his own judgment upon him, that "Frère Jonathan est très exalté, de sa nature." But he frankly acknowledges, in a postscript, that he has been "trop sévère envers M. Morse;" and for this, and certain other hasty but not deliberately ungenerous judgments, cheerfully apologizes on the plea of "ma vivacité." A translation of M. Moigno's volume would form an admirable basis for an English standard work on the Electric Telegraph.

A difficulty, at first sight very formidable, attends all explanations of electrical phenomena. The question is asked, What is electricity? And to this no categorical answer can yet be returned. The question, however, may be set aside, as not requiring to be answered before the effects of electricity are considered. Of the nature of heat and of light, as well as of magnetism, we are in truth still quite ignorant; but we do not hesitate to discuss the changes which matter undergoes when illuminated, heated, or magnetized, without waiting till our theories of heat, light, and magnetism are perfect. We can do the same, therefore, with electricity, in explaining the telegraph, or any other electrical contrivance—provided we adopt some provisional theory as to its nature, which shall supply us with suitable terms for describing the phenomena, although it may be quite inadequate to account for them.

Two views, setting aside minor modifications, are entertained concerning the nature of electricity—very analogous to those now held concerning the nature of heat, light, and magnetism. According to the one view, electricity is a state, condition, or power of matter. According to the other view, electricity is a peculiar substance, or form or kind of matter. The latter is the more easily apprehended hypothesis; and supplies the nomenclature almost universally adopted in describing electrical phenomena, even by those who prefer, as more probable, the opposite belief. Electricity, then, may be assumed to be a highly attenuated substance—analogous to an elastic fluid, such as hydrogen gas, but infinitely lighter; in truth, not sensibly heavy at all. In bodies not exhibiting electrical phenomena this imponderable entity is supposed to exist in a latent or insensible condition, hidden as it were in their substance or pores. Bodies, on the other hand, which manifest electrical phenomena, have the imponderable fluid set free at their surfaces, in an active, sensible, or non-latent condition; so that it envelops them, as a fog does a mountain-top; or flows over them, as smoke does over the mast of a ship; or flows through them, as a current of warm water streams through a mass of cold. Electricity, as thus defined, is as invisible as common air; but when its intensity is high, it is cognizable by all the senses. It addresses the eye by its spark or lightning-flash; the ear by its snap or thunder; the nostrils by a peculiar indescribable odor which it develops; the tongue by an equally peculiar taste which it occasions; and the organs of touch by its characteristic shock. The unknown something, condition, or kind of matter, which is the cause of those and many other phenomena, is electricity. We shall, for the present, write of it as a kind of matter, *i. e.*, as something over and above or superadded to the body, whatever that be, which exhibits electrical phenomena; so that a telegraph-wire will be referred to, as conveying a current of substantial electricity, as a gas-pipe conveys gas, or a water-pipe water. Before, however, we can consider how this wonderful agent is made to convey intelligence, we require to notice certain relations of electricity which must be discussed before the explanation can proceed.

The phraseology of scientific treatises, in reference to electrical phenomena, is very apt to mislead

and perplex those who consult them for information concerning special points. Such terms continually occur as, statical electricity, dynamical electricity, positive electricity, negative electricity, electricity of tension, electricity of quantity, friction electricity, voltaic electricity, animal electricity, magneto-electricity, thermo-electricity—till the distracted reader, who finds one electricity perplexing enough, loses count and heart, and closes the treatise in despair. But this formidable list of electricities, which might readily have been lengthened, fortunately admits of being reduced to *two kinds* of electricity, and *two modifications* of each kind. The kinds are *Positive* and *Negative* electricity. The modifications are electricity *of Tension*, and electricity *of Quantity*. Statical and dynamical refer respectively to free electricity, as either at rest or in motion; and the five other titles merely point to certain important sources of electricity—which, however, is essentially the same, whatever be its source. The titles, positive and negative, apply to a much deeper and more fundamental peculiarity of electricity than the terms tension and quantity; but the latter are more important in reference to its practical applications; inasmuch as they are variable; whilst the twofold positive and negative relation of this agent is constant—and, so far as we at present know, inseparable from the very existence and manifestation of all electricity. We shall discuss this duplex character of electrical force presently; but it will be better appreciated after the difference between electricity of tension and electricity of quantity has been shortly explained.

The phrases in question, which, philologically considered, are inaccurate and inelegant enough, are used to denote the difference which is found to exist between the quantity of electricity which any source of it, such as a voltaic battery, furnishes, and the intensity of the electricity so furnished. The distinction is one of the same kind as that which is familiarly recognized in the case of light and heat. In the phosphorescence of the sea, for example, which often spreads continuously over thousands of miles, we have an illustration of light very feeble in intensity, but enormous in quantity; a white-hot platinum wire, on the other hand, gives out a very small quantity of light, but that of high intensity; while the sun radiates light at a maximum, as regards both intensity and quantity. A similar variation exists in the case of electricity; only that we have no electrical sun, *i. e.* no source, natural or artificial, of electricity alike great in quantity and in intensity.

We measure *the quantity* of electricity in many ways; but most conveniently by the amount of any chemical compound which it can decompose. A machine or battery, for example, which, when arranged so as to decompose water, evolves from it four cubic inches of oxygen and hydrogen in one minute, is furnishing twice the quantity of electricity supplied by an apparatus which evolves only two cubic inches of the gases in the same time. The *intensity* of electricity is less easily measured; but is well enough indicated by the ease with which it can travel through bad conductors; by its power to overcome energetic chemical affinity, such as that which binds together the elements of water; by the length of space across which it can pass through dry air (as in the case of the lightning flash striking a tree from a great distance); by the attractions and repulsions it produces in light bodies; and by the severity of the shock it occasions to living animals. Tried by those tests, and by others, we find that the electricity of the friction-machine, of an insulated steam-boiler, or of a thunder-cloud, has extraordinary intensity—while its quantity is excessively small. We speak very much within bounds when we state, that the whole electricity of a destructive thunder-storm would not suffice for the electro-gilding of a single pin—so insignificant is its amount. A small copper wire, dipped into an acid along with a wire of zinc, would evolve more electricity in a few seconds than the largest friction electrical machine, kept constantly revolving, would furnish in many weeks. No shock, on the other hand, would be occasioned by the electricity from the immersed wires; nor would it produce a spark, or decompose water—so low is its intensity. A double-cell voltaic battery, again, produces electricity of such intensity that its shock would kill a large animal; and it can force its way along very bad conductors—at the same time its quantity is so enormous that torrents of oxygen and hydrogen rise from the water it is made to decompose.

Out of the distinctions thus explained have arisen the phrases, electricity of Tension and electricity of Quantity. Interpreted literally, those terms have no meaning. We cannot recognize the existence of any Electricity, unless it possess such intensity as to produce some effect cognizable by our senses; neither can any intensity be conceived as separated from a quantity of electricity which possesses that intensity. The terms in use are thus very awkward. In ordinary language we should use intense electricity for the one, and leave the other undefined, or only call it abundant electricity. But those questionable terms are now universally employed; and are rendered necessary by the circumstance already adverted to, that we have no artificial method of producing enormous quantities of electricity at a high intensity. As produced by us, therefore, it must always take a character from the preponderance of its intensity, or the preponderance of its quantity. Tension is merely a synonyme for intensity, which originated in the hypothesis of electricity being an elastic fluid, which might be regarded as existing in a thunder-cloud, or on the conductor of a friction-machine in a state of condensation or compression, like high-pressure steam struggling to escape from a boiler, or air seeking to force its way out of the chamber of an air-gun. The word tension, we believe, has been preferred

to intensity, simply on account of its brevity, and its convenience in forming a double noun with electricity. Electricity of intensity then, or tension-electricity, is electricity characterized by the greatness of its intensity—or whose intensity is greater than its quantity. Electricity of quantity, on the other hand, has its quantity greater than its intensity. The intensity diminishes as the quantity increases; but the ratio which the one bears to the other differs through a very wide scale, so that a knowledge of the degree of the one does not often enable us to predicate the amount of the other. Practically, we have no difficulty in reducing both to a minimum, or in exalting the one whilst we reduce the other; but we cannot at once exalt both intensity and quantity. The discovery of a method of effecting this will make a new era in the science; and admit of the most important applications to the useful arts. Meanwhile we may compare electricity of tension, as we have done already, to high-pressure steam issuing in small jets under great pressure; and electricity of quantity to the thousands of cubic feet of invisible vapor which arise softly every moment from the surface of the sea. Or the former may be likened to a brawling, gushing mountain brook, rushing with great force but little volume of water; and the latter to the slow rolling Amazon or Mississippi, silently moving onwards to the sea. Or the first to a swift, sudden hailstorm or avalanche, and the second to the inexhaustible glacier, constantly melting, but as constantly increasing. Or the one to an instantaneous gust or white squall, passing off in a moment, and the other to the unceasing trade wind, forever sweeping gently over the bosom of the waters.

It depends upon the purpose to which electricity is to be applied, whether it should be chosen great in quantity, or great in intensity. If the chemist desires to analyze a gaseous mixture by detonation, he will use the friction-machine, to supply a momentary spark of great intensity. But the electro-plater, who has constantly to decompose a compound of gold or silver, employs the magneto-electric machine, or a small voltaic battery—which furnishes great quantities of electricity of considerable intensity. The electric light requires both quantity and intensity to be very great. For the electric clock the intensity may be at a minimum, and the quantity need only be moderate. The electric telegraph demands great quantity, but the intensity need not be very high.

This much premised, we may now consider its application to the construction of the telegraph. An electric telegraph consists essentially of three things. First, a voltaic battery or other apparatus to evolve, when required, electricity. Secondly, an arrangement of metallic wires or other good conductors, to convey the electricity to the distant places with which telegraphic communication is to be carried on, and to bring it back to the machine from which it set off. Thirdly, the application of the electricity so conveyed, to produce at the distant station some striking phenomenon, which, according to a preconcerted arrangement, shall represent a letter of the alphabet, a numeral, a word, a sentence, a paragraph, or the like. A source or fountain of electricity, conductors to carry it, and a dial plate on which it shall cause an index to exhibit signals, are thus the essential elements of an electric telegraph.

Our present object is to discuss chiefly what is electrical in the telegraph—without much reference to the mechanical devices or subsidiary arrangements which it involves. Our first concern, then, is with the source of electricity; and, as our space is limited, we shall confine ourselves to the voltaic battery, the apparatus chiefly in use along the telegraph lines. A voltaic battery, in its simplest form, consists of two dissimilar solids —generally metals—arranged side by side, without touching each other, in a liquid which dissolves only one of them. One of the solids is almost invariably a plate of zinc, rubbed over with quicksilver, or, as it is called, amalgamated. The other is copper, iron, silver, gold, or platinum; the last being preferred for very powerful batteries, and admitting of being replaced by coke. For telegraph-batteries, amalgamated zinc and copper, or zinc and silver, are generally employed; and the liquid in which they are dipped is diluted sulphuric acid—which dissolves the zinc, but does not affect the copper or silver. Let us suppose copper and zinc to be the metals selected. We have it in our power to take all the copper we propose to employ, in one large sheet, and all the zinc in another; or we may cut down each sheet into many small ones. *The quantity* of electricity evolved by a voltaic battery is chiefly determined by the size of the plates made use of; but if we take a single sheet of zinc, however large, and a single sheet of copper, we find *the intensity* of the electricity they evolve exceedingly feeble. If, on the other hand, we cut down each of the large plates into several smaller ones, and arrange these so that the copper and zinc shall be placed alternately, in a way to be presently described, we find the quantity of the electricity much diminished, but its intensity greatly increased. Unless the intensity be considerable (although it need not be very great) the electricity cannot force its way along a great length of conductors; and, if its quantity be not great, its effect will be but momentary. Plates, however, a few inches square, supply a sufficiency of electricity for the longest telegraph line; and from twelve to sixty pairs of such plates are as many as are required. The exact number needed will be determined by the distance which the electricity is to travel. By varying the number and size of the plates, as well as the strength of the acid in which they are dipped, the quantity and intensity of the electricity may be modified through very wide limits.

A voltaic battery, strictly speaking, consists of associated pairs of dissimilar solids, such as zinc and copper. A single pair, or *simple* voltaic cir-

cle, like a single cannon in an artillery battery, is but an elementary portion of a voltaic *battery*, which is constructed by arranging several pairs together. The simplest voltaic battery, then, will consist of at least two pairs, *i. e.* of four plates, two of zinc and two of copper. In arranging these, two glass beakers or drinking tumblers are taken, and placed side by side, half full of diluted sulphuric acid. A wire is then soldered to one of the zinc plates, and a corresponding wire to one of the copper plates, and one of these plates is placed in each of the tumblers. The second zinc plate is thereafter soldered by one edge to the second copper plate, so as to form one continuous surface of metal. The compound plate thus produced is then bent over, so that the soldered edges form the summit of an arch, which resembles a saddle, with one flap consisting of copper and the other of zinc. This metallic saddle is placed astride of the approximated edges of the tumblers, so that the zinc flap dips into the vessel in which the first copper plate with the wire is immersed, and the copper flap into the tumbler containing the zinc plate with its wire. If we wish to enlarge the battery, we take additional tumblers, and such copper-zinc arches as have been described, connecting the vessels, half filled with dilute acid, by the metallic bridges which dip on either side into the liquid; taking care, also, that all the zinc semicircles or saddle-flaps shall be turned in one direction, and all the copper ones in the opposite, so that zinc and copper succeed each other alternately, from the first tumbler at one end of the range to the last at the other. In actual practice, porcelain, or wooden, or gutta percha cells or troughs are generally substituted for glass vessels, and the pieces of zinc and copper are not soldered together, but only connected by movable wires and binding screws. But these mechanical adjustments are only for greater economy and convenience; and the battery remains, in principle, identical with the arrangement described.

Such, then, in its most skeleton and simple form, is the apparatus which is to furnish the *primum mobile* of our telegraph. Although each zinc and copper pair contributes to the power of the battery, the whole electricity generated by it manifests itself only at the detached zinc plate at the one end of the battery, and the detached copper plate at the other. A battery thus resembles a compass-needle or bar-magnet, which appears to manifest its inherent magnetism only at its opposite poles; although, in reality, it is magnetic throughout its entire length. In the practical application of such a battery, accordingly, no account is taken of any portion of it but the terminal zinc and copper plates, to each of which a wire is attached. To these plates all the intermediate ones convey the electricity which they respectively set free; so that we may, after all, properly enough conceive the battery as consisting of a single plate of zinc and one of copper. Such an embryo battery—or, rather, voltaic pair—might, indeed, be used for working the telegraph, where the distance was very short; and it is quite within possibility that a single voltaic pair of strongly contrasted solids, immersed in a rapid solvent of one of them, will yet be found sufficient for working the longest existing or conceivable telegraph line. As it is, the intermediate pairs of the voltaic batteries in actual use are introduced only to give the requisite intensity to the electricity generated. They may be ignored in our further discussion; and our telegraph-battery will resolve itself into a piece of copper and a piece of zinc, immersed, without touching each other, in the same vessel of acidulated water.

For the sake of simplicity and clearness in our further description, we shall suppose the battery described, as locally situated in London; and that our object is to send messages to Edinburgh, without communicating with any intermediate place. An iron wire, plated with zinc to keep it from rusting, is connected with the *copper* plate of the battery, and then stretched all the way from London to Edinburgh, along wooden poles, erected some sixty yards apart. In order that the electricity, which is to travel along this wire, may not go elsewhere than to the northern metropolis, the zinc is *insulated*, i. e. prevented from coming in contact with metallic conductors, moist wood, or other surfaces which would transfer the electricity along the poles to other wires that are generally stretched upon them, or to the earth. The insulation is effected by passing the wire through rings or short tubes of glazed porcelain, attached to the posts, so that the electricity has no choice but to move along the wire. At Edinburgh the wire is placed in connection with the signal apparatus, to be afterwards described; and then is brought back to London through separate porcelain tubes along the poles as before, and finally terminates at the detached *zinc* plate of the battery. In the arrangement described, which is the earliest and most easily understood form of telegraph, it will be observed that the zinc and copper plates of the battery at London are connected by one unbroken metallic wire, which extends to Edinburgh, bends back there, and returns to London.

The wire, however, does not return to the latter city, in order to provide a channel for messages being sent from Edinburgh to London, as well as from London to Edinburgh. Without this returning double wire, (as we shall call it,) or an equivalent arrangement of conductors, it is impossible to telegraph from either town to the other, even if it were thought sufficient or desirable to send messages only from one of them. It will appear from this, that there must be something peculiar in the way in which electricity travels along the telegraph-wire. We have compared it to the transmission of a fluid; but the wires cannot convey it as pipes do gas or water, otherwise there would be no occasion for the return-wire. A tube extending from London to Edinburgh, and filled with air or water, might be employed to telegraph from the metropolis to the northern capital, as an air-tube is actually employed at the rail-

way tunnels near termini; and but one tube only would be needed, if messages were sent only from London. It is very different with electricity; it must not only travel to Edinburgh, but it must come back to London—otherwise nothing can be recorded at Edinburgh; so that the communication must be as complete between Edinburgh and London, although the latter only is to send messages, as between London and Edinburgh.

The explanation of this peculiarity, if we avoid the niceties of electrical theory, may be said to be found in the fact, that no electricity leaves the battery till its terminal zinc and copper plates are *connected* (after a long *détour*) by a wire or other electrical conductor. It is not as if one wire were sufficient at least to carry the electricity from London to Edinburgh. Our electrical messenger is like a government courier—who does not start till he is satisfied that there are relays of horses to make certain his homeward, as well as his outward journey. If there be not a return-wire, or equivalent arrangement, the electricity never sets off from London! or, rather, there is in truth no electricity to set off in any direction, till the zinc and copper at that starting place are connected. Till a communication is effected between them, the battery is equivalent only to a loaded gun. The completion of the connection is like the fall of the trigger which fires the charge. In a moment the battery discharges its electricity, which, with inconceivable rapidity, passes, by the shortest route it can find, from the copper plate at the one end of the battery, to the zinc plate at the other. No shorter route, however, is provided for it than the insulated wires, so that in the case supposed, although the plates to be connected are only a few inches apart, the electricity which leaves one of them must travel from London to Edinburgh and back again, before it can arrive at the other! Our newest telegraph, in this respect, is like Noah's most ancient one. His raven "*went to and fro*," and his dove "*returned*" to the ark with the olive-leaf in her mouth.

If we look, however, a little more closely into what happens, we shall find something still more curious than we have yet indicated, in the movements of the electricity produced by the battery. We have hitherto represented matters, as if only one current of electricity swept along the wires; but, in reality, if we are to speak of currents at all, we must acknowledge at all times two, moving in opposite directions. Electricity, like magnetism, always displays itself as a two-fold force. A bar-magnet, or compass-needle, has magnetism at each pole or extremity. The magnetism of its north pole has the same powers and intensity as the magnetism of its south pole, if we test these by their action on a third body, such as a piece of non-magnetic iron. But if we try two bar-magnets against each other, we find that the south pole of the one attracts the north, but repels the south pole of the other, and *vice versâ*; and if a north and south pole be placed together, instead of the magnetism being doubled in intensity, it is reduced to zero—or what we may call the northern magnetism neutralizes the southern magnetism, and all indications of free magnetic force cease.

Electricity exhibits exactly similar phenomena. In the very act of becoming free, as when it is evolved from a voltaic battery, it separates into two forces—identical in nature, but opposite in the direction of their manifestation—whose intensities and powers are equal, and which, like the northern and southern magnetisms when they meet, instead of yielding a double electrical force, neutralize and annihilate the powers of each other. To the two electricities the names have been given of *positive* and *negative* respectively—an unfortunate nomenclature, as it almost unavoidably conveys the impression that the one is more positive or potent than the other; whereas the negative electricity has as positive an existence, and as substantial powers, as the opposite electricity—and neither, in fact, can be produced without the development of the other. The terms in question, like the older ones, *vitreous* and *resinous*, are to be regarded, in short, as quite arbitrary, and might be replaced by any other words or signs;—though we leave medical men to explain the account which a wilfully ambiguous critic has given of *their* electrical acquirements: viz., that their knowledge of electricity is chiefly of the negative kind!

The twofold magnetism in a bar-magnet has been likened to a double-headed arrow at rest, pointing in two opposite directions, like a wind-vane. The two-fold electricity liberated from a battery may be likened to a similar double-headed arrow—not at rest however, but rapidly elongating itself in opposite directions, so as to separate its two heads or points further and further from one another. The one arrow-head represents positive, the other negative, electricity. Though they separate, they are never disunited. At first they move straight away from each other; but their paths are equivalent to semicircles of the same radius, and are in the same plane, so that they ultimately meet—and in the act of meeting, each arrow-head destroys the other, and a harmless non-electric circle is completed. The Egyptian hieroglyphical serpent, devouring its tail, might be accepted as the symbol of the closed electric circuit.

If we apply what has now been said to the telegraph, the necessity for the two wires will appear in a new light. When the plates of the battery, consisting of amalgamated zinc and copper, are merely placed apart from each other in dilute sulphuric acid, no change of any kind occurs. But if they are connected, as by attaching the zinc to the one end of the double telegraph wire, and the copper to the other end, the zinc immediately begins to dissolve in the acid; and simultaneously with this solution of the metal, and the evolution of hydrogen from the water, electricity in its two-fold form is developed. At the middle point in the liquid between the two immersed plates we may suppose the electricity to come into existence,—likening it as before to a double-headed arrow. Elongating themselves in directly opposite direc-

tions through the liquid, the one arrow-head speedily reaches the copper plate on the one side, and the other arrow-head the zinc on the other. The arrow at the copper is positive electricity. If we speak of it as before, we shall say that a current of positive electricity flows from the copper along the telegraph wire to Edinburgh, and then returns to the zinc plate, where it may be regarded as stopping:—at the same time that a current of negative electricity travels from the zinc plate along the same telegraph wire, in an opposite direction to that taken by the positive current, and may be considered as ending at the copper plate.

According to this view, the narrowest telegraph wire may be compared to a railway with two sets of rails, along which trains (of positive and negative electricity) travel in opposite directions—in obedience to a statute which requires that there shall always be two opposite trains moving at the same time along the rails. We must further regard the wire, whilst conveying electricity, as traversed, not by solitary engines or a few carriages, but by trains occupying the entire length of the railway—fresh carriages constantly setting off at the one end, and being detached at the other.

The necessity, however, for the double wire, is best seen when we revert to the notion of electricity travelling like a flying arrow. The route of the arrow is the wire, and the latter must be double, because the arrow itself is not an English cloth-yard shaft, which flies only in one direction; but such a two-forked thunder-bolt as the Greek sculptors placed in the clenched hand of Jupiter Tonans, which shoots east and west or north and south at the same time, and the one bolt of which will not fly in one direction unless the other is equally free to move in the opposite direction.

What evidence, it may here be asked, is there to show that anything substantial moves along the telegraph-wires? To this, as already implied, there is but one answer. No actual proof can be given of the passage of anything material. The flowing currents and the flying arrows are both purely imaginary—though the one is an hypothesis, and the other but an illustration. But there is yet another mode of explaining the apparent passage of this invisible agent. It is, to be sure, quite as hypothetical as the other two; but it is, on the whole, more likely to be true; and it is therefore now preferred by most men of science. Our discussion would consequently be incomplete if we did not refer to it.

According to this view, the metallic conductor, such as the telegraph-wire which connects the terminal plates of the voltaic battery, is not a highway along which electricity travels; but the wire exhibits electrical phenomena throughout its entire length, only because its connection with the zinc and copper wetted by the acid, produces, for the time, a new arrangement of its own particles or molecules, which invests the wire with new properties—those, namely, which we call electrical. Nor is there anything extreme or anomalous in this assumption. The whole of physical science bears testimony to the fact that we cannot alter the arrangement of the component parts of a mass, without inducing a corresponding change in the qualities of the mass those atoms build up. Soot and wood-charcoal, coke and black lead, owe their different properties merely to a different arrangement of identical particles of carbon; and a further modification of these invests them with the utterly diverse and characteristic attributes of the diamond. But the electrical differences between two wires, one acting as an electrical conductor, and the other not, surely are not greater than the optical differences between a lump of coke and a diamond crystal—or between carbonate of lime, uncrystallized in chalk, and crystallized in pellucid Iceland spar. We can set no limits, indeed, to the extent to which modification of molecular arrangement will affect the properties of a mass.

Nor is it any objection to such a view, that a metallic wire is a rigid solid, the component particles of which are so locked together as not to admit of motion upon each other, or change of relative position. The opinion once entertained, that only liquids and gases permit the mobility requisite for alteration in molecular arrangement, is now universally abandoned. And, indeed, the expansion and contraction of a mass of metal under the influence of heat and cold is a sufficient refutation of it. The Menai tubular iron bridge creeps, like a huge snake, backward and forward several inches during the twenty-four hours of a midsummer day. The massive glacier changes, from an aggregate of minute crystals of packed snow, into a mountain of clear ice. Every school-boy is familiar with the same phenomenon as developed during the formation of a slide on a surface of snow. In copper mines, an iron hammer, dropped into a pool saturated with cupreous salts, is found, after the lapse of years, converted into a hammer of copper:—the whole of the iron has been extracted, and its place supplied, to the very centre, by copper—without the form or the bulk of the solid having altered during the process of transmutation. During the production of steel from iron, in like manner, the latter is embedded in charcoal powder, and the whole made red hot. The charcoal then penetrates into the solid iron, and impregnates its entire mass.

These examples (and many more might be added) apply to alterations in the structure of solid masses, much greater than we need assume to occur in an electrical conductor. So that we need not hesitate to admit as possible, molecular changes of a more simple character. The change that probably happens in the telegraph-wire is believed to resemble what we can pretty confidently affirm to take place in magnetized iron, where the characteristic phenomena are more readily observed, and are more familiar than in the case of electrical conductors. A bar-magnet, or compass-needle, appears at first sight to possess magnetic powers only at each end, or pole. On closer examination, however, it is found to possess the opposite northern and southern magnetisms, in alternate succes-

sion throughout its entire length. We may compare it to one of the lines or stripes of a chess-board, or tesselated pavement, made up of *alternate* colored pieces. The colors, however, must be only two—for example, blue and yellow: the first square, or tessera, being of the one color, and the last of the other. A piece of non-magnetic iron becomes temporarily magnetic if brought into the neighborhood of a permanent magnet, such as a loadstone; and while thus magnetic, the iron exhibits the same alternation of oppositely magnetic particles which the compass-needle does. We may liken non-magnetic iron to an aggregate of compound green particles. It becomes magnetic in consequence of each of these separating into a blue and a yellow particle—which follow each other alternately in rows. When the iron ceases to be magnetic, in consequence of the withdrawal of the loadstone, the result is as if the blue and yellow particles united again, and the whole became uniformly green. In like manner the wire which connects the zinc and copper of a voltaic battery is believed, in consequence of its junction with these metals whilst they are affected by the acid, to have induced upon it, throughout its entire length, a succession of alternate electro-positive and electro-negative points, or particles possessed of positive and negative electricity respectively. The arrangement is of exactly the same kind as that of the magnetic bar—only it is an alternation, not of the opposite magnetisms, but of the opposite electricities. They remain separate so long as the constraining force of the battery is exerted upon them; but the instant the wire is disconnected from it, the separate electricities unite, and all electrical phenomena cease. We may liken the telegraph-wire, when disconnected from the battery, to a thread on which purple beads are strung together, as on a necklace. When the wire is connected with the battery, each purple bead separates into a red (positively electric) and blue (negatively electric) one. The red and blue beads now succeed each other alternately along the line; and remain separate, whilst, in the language of another theory, electricity is passing; but they coalesce again into the compound purple spheres, so soon as the connection with the battery is interrupted.

According to this view, there is no travelling of electricity charged with messages from one station to another. The message telegraphed from London to Edinburgh is not wafted by electricity which speeds from the former, inscribes its hieroglyphics at the latter as it rushes past, and fleets back to London; but the telegraph-wire, with inconceivable rapidity, merely arranges its own constituent particles, from end to end, in alternate electro-positive and electro-negative molecules; and the index on the Edinburgh dial plate is affected only by the small portion of the wire which surrounds the gnomon. It is as if a row of men were placed side by side from Edinburgh to London, with signal-flags in their hands. The flag shown as a signal at Edinburgh has not been passed along the line. No man has stirred further than to observe the flag shown him by his neighbor on the one side, and to show a corresponding flag to his neighbor on the other. The flag displayed at Edinburgh was there from the first, though unfurled, and remains there concealed, till the next message is telegraphed from man to man.*

* The arrangement described in the text, of alternate oppositely magnetic or oppositely electrical particles, is an example of what is called Polarization. A compass-needle exhibits magnetic polarity; a voltaic battery or electrical conductor, electric polarity. We have hitherto avoided the word, because it has proved a stumbling-block rather than a help, in the exposition of the physical sciences, to those who do not make them a special study. A few words, however, in explanation of the "idea of polarity" may be given here. The terms, "to polarize," "polarization," and "polarity," are taken from the compass-needle, the extremities of which pointing, the one to the north pole of the earth, the other to the south pole, have long been distinguished as *the poles* of the compass-needle, or magnet. The largest magnet, moreover, appears to consist of a multitude of smaller magnets, arranged in rows end to end. The magnetic properties of the hugest magnet are thus referred to its consisting throughout its entire mass of particles, each of which if detached would exhibit a north and south pole. If this polar arrangement be destroyed, all magnetic phenomena cease. Thus, if a loadstone be approached to a piece of soft iron it polarizes it, or induces in it magnetic polarity. In other words, the loadstone develops alternate north and south poles in the iron, and this polarization of the particles of the metal continues as long as the loadstone is in its neighborhood.

The idea, suggested by magnetic phenomena, of alternate poles, is transferred to electricity as well as to other forces—with an important restriction, however, the overlooking of which is the great cause of the unintelligibility to general readers of all references to polarity.

In its extended sense, the term carries with it only the conception of an alternation of particles, or points, (centres of force,) possessed of opposite powers—without including the idea of those particles having a directive tendency in space, so that they take up positions in relation to the poles of the earth. Thus the polarity of *light* is evidenced in one class of phenomena, the polarity of *heat* in another, that of *electricity* in a third, that of *chemical affinity* (which, however, is perhaps identical with electrical polarity) in a fourth, that of *crystalline affinity* in a fifth. But light, (polarized) heat, (polarized) electricity, chemical affinity, and crystalline affinity, all agree with magnetism, in manifesting their powers, *not as single, but as two-fold forces*; and are all characterized by the exhibition, side by side, of two agencies, the same in nature, yet opposite in the mode of their manifestation. Thus positive and negative electricity have each a power of attraction and a power of repulsion, of the same kind, of the same intensity, and regulated by the same laws—except that in the circumstances where the one electricity exhibits attraction, the other exhibits repulsion, and *vice versâ*. And, in like manner, a ray of polarized light, or heat, a row of magnetized or electrified molecules, or a row of atoms under the influence of chemical affinity or crystalline agency, agree in the manifestation of a twofold force, exhibiting itself in the alternation of oppositely endowed points or particles.

This common character is now denoted by saying that they all exhibit polarity; nor have we any other term in our language possessing the same signification. It is much to be regretted, therefore, that its value has been lessened by its vague employment. By many it is used to denote the mere antagonism of two forces. Man, for example, is said to exhibit polarity, because he is possessed of soul and body! And though such language might be consistent in the mouth of a pure idealist, or a pure materialist, it is not competent to one who regards mind and matter as essentially distinct. Polarity is not merely the antagonism or dualistic development of two unlike forces. We can keep a mass of iron suspended either by a loadstone or by a spring, or by the muscular exertion of an animal. And here we have three examples of the antagonistic manifestation of two forces—gravity and magnetism, gravity and elasticity, gravity and vital force. But none of those are exhibitions of polarity. It is the antagonistic or dualistic

The reader can select whichever of the explanations now given he prefers, or can devise theories for himself, or dispense with any. But the ultimate and only important *fact* in reference to the telegraph is, that by the marvellously simple device of dissolving a few pieces of metal connected with a long wire, we can develop instantaneously, a thousand miles off, a force which will speak for us, write for us, print for us, and, so far as the conveyance of our thoughts is concerned, annihilate space and time. This annihilation is not of course complete, but in reference to practice it may be called so. Shakspeare's Juliet refers to "the lightning which doth cease to be, ere one can say it lightens." The exact velocity of electricity along a copper wire is 288,000 miles in a second. It is calculated, accordingly, that we could telegraph to our antipodes in rather less than the five hundredth part of one second of time!

The most impatient of correspondents may be satisfied with this velocity; and we may now inquire in what way electricity is made to produce signals. In discussing this we shall recur to the provisional theory adopted at the outset, that electricity flows in currents; and in conformity with the universal practice of expositors of these phenomena, write as if there were but a single current of positive electricity flowing at once along a telegraph wire. The other and opposite negative current may conveniently be disregarded, just as in navigation a compass-needle is referred to as if it had but one pole, pointing to the north.

Having secured the means of transmitting at will a current of electricity with great velocity, it remains to determine what phenomenon we shall cause it to produce at the distant station.

The phenomena most easily produced by electricity are *magnetic* ones; and these, accordingly, are now preferred as the sources of signals. The electric telegraph, indeed, remained an unrealized idea in the minds of ingenious men, till the famous Danish philosopher, Oersted, discovered that a current of electricity, even though of very small intensity, if passing near a compass-needle poised on a pivot, will cause the needle to change its position, and point in a new direction. Let the telegraph-wire, for example, whilst connected with a battery, be placed so that the needle of a mariner's compass shall be directly below or above and parallel to the wire, and the needle, no longer "true to the pole," will whirl round and stand east and west, instead of as before, north and south. It depends upon the direction in which the current of electricity is sent, which pole of the compass-needle points east or west. Let the telegraph-wire stretching from London to Edinburgh and back again, be considered as consisting of an upper and a lower wire. If the London end of the upper wire be connected with the copper extremity of the battery, whilst the termination of the lower wire is connected with the zinc, the current of positive electricity (the only one of which we now take cognizance) will flow along the upper wire to Edinburgh, and return by the lower one to London. If the upper wire be now attached to the zinc, and the lower to the copper, the current will travel north by the lower wire, and come south by the upper. Now, without entering into details for which we have not room, and which are not essential to the comprehension of the telegraph, it may suffice to say, that the pole of the compass-needle, which points east if the electrical current passing near it be sent in one direction, points west if it be sent in the opposite one; while, if the passage of electricity be discontinued, the needle resumes its original position. We have it thus in our power to cause a compass-needle to move to either side at will; and we can bring it in a moment to rest. All those effects are produced still more strikingly if the wire, instead of being stretched above or below the compass-needle, be coiled many times around the compass-box, or case containing the magnetic needle. The wire, in that case, is covered with thread, which allows its coils to be put close together, without risk of the electricity passing *across* from coil to coil where they touch, as it would do, if the thread, which is a non-conductor, did not insulate the electricity. It is more convenient that the magnetic needle should

development of *one* force, as of electricity antagonizing electricity, magnetism antagonizing magnetism. Polarity, in short, implies unity quite as much as duplicity, and may literally be said to exhibit a force or power "divided against itself." This division, however, never becomes schism. The one twin is never found detached and alone, but always side by side with the other, and when permitted they combine, neutralize each other—and then polarity ceases. We have likened a body exhibiting polarity to a double-headed arrow, or to Jove's two-forked thunderbolt. It might also be compared to the conventional zodiacal sign Pisces with its connected fishes, to the heraldic double eagle, to the Siamese Twins, or perhaps best of all, though the comparison is a homely one, to two hunting dogs of the same breed, size, shape, and power, held in couples, and pulling against each other. All those objects agree with each other, and with bodies or forces exhibiting polarity, in being double unities. Similes, however, may be pushed too far. The idea of polarity is best based on the spectacle of the compass-needle—with its opposite powers at its opposite ends, and its *one magnetism* determining the tendencies of both.

Another misapplication of the term Polarity is to the opposite effects which the same force exhibits when its intensity varies. Thus heat of a certain intensity causes quicksilver to combine chemically with oxygen; and heat of a greater intensity causes the combined oxygen and quicksilver to separate again from each other. A slight mechanical impulse increases cohesion; a more powerful impulse destroys it. But those are not exhibitions of polarity. Heat, for example, either entirely decomposes, or entirely combines; it does not do both at once—as electricity does, when it decomposes (electrolyzes) chemical compounds. Variation in intensity, moreover, is not *the cause* of the opposite powers of the poles of a magnet, or a voltaic battery. The northern magnetism, on the contrary, always possesses the same intensity as the southern magnetism—positive electricity the same intensity as negative electricity. If the word polarity signified only dualism, it should be struck out of the language; for it is obscure to ordinary readers, and very far-fetched. But if we discard it as implying one kind, and one kind only of dualism, we must introduce some new term to denote the duplex unity, which those who employ it wisely, intend it alone to signify.

Some have inconsiderately sought to render the main truth under notice more distinct, by referring to a body such as a magnet exhibiting polarity, as *bi-polar*. This, however, is a useless and vicious tautology. We might as well speak of a four-sided square, or a three-angled triangle. A polar body is, by its very definition, bi-polar—just as a square is necessarily four-sided, and a triangle three-angled.

originally stand vertically, so as to move from right to left, or *vice versâ*—like the index of a wheel barometer, than that it should revolve in a horizontal plane like the mariner's compass. It is also much more easily moved, if the effect of the earth's magnetism on it be neutralized. This is done by placing *two* magnetic needles on the same axis, with their poles reversed, so that the north pole of the one is opposite the south pole of the other. Such an arrangement, if the needles are of equal power, has no tendency towards one point of the compass more than another; and by making what are to be the lower ends of the needles somewhat heavier than the opposite extremities, the needles, when not under the influence of electric currents, will at once resume their vertical position.

Now, the one needle which is to act as the visible index, appears in front of a dial plate; the other surrounded by the coil of covered wire, which is continuous with one of the telegraph-wires, is placed behind the dial. An arrangement of this kind is provided at Edinburgh, the upper telegraph-wire being drawn out there into a long loop, which consists of soft copper wire covered with thread. This is wound round the concealed magnetic needle, so that a current of electricity moving along the upper wire follows the coiled loop, moves the needles in passing, and returns to London. At London, for a reason to be mentioned immediately, there is a similar loop or coil of covered copper wire surrounding a double magnetic needle, and then rejoining the upper main wire from which it proceeded. From the copper end of the battery, a wire is conducted to one of the strands of this coil, and soldered to it. From the zinc end a wire also is conducted, which is soldered to the lower telegraph-wire. The current setting off from the one end of the London battery, deflects the needles at London and at Edinburgh before it returns to the former. That the needles may be deflected to either side at will, a contrivance is supplied for cutting off and letting on, as well as for reversing, the electric current from the battery. It is a little difficult, without a diagram, to explain distinctly this important portion of the telegraph. The following description, however, will perhaps make it sufficiently clear. Let the upper end of the double telegraph-wire at London be marked A, and the lower end B. If A be connected to the copper of the battery, and B to its zinc, the current of electricity setting off from A, and returning to B, moves the index-needle to one side, for example to the left. If the arrangement be now reversed, so that A is connected to the zinc, and B to the copper, the current flows from B to A, and moves the needle to the right.

In actual practice, however, the wires are not shifted from the zinc to the copper, but are *cut across* between the battery on the one hand, and the telegraph-wires and coil round the magnetic needles on the other. The gap thus made is left vacant when no message is to be sent. When a signal is to be transmitted, a metallic cylinder is moved by a handle so as *to fill up the gap*, and establish continuity between the wires and the copper and zinc respectively, of the battery. This bridge, however, is so contrived, that when the handle which controls it is moved to the left, it stretches in such a manner as to connect the end A of the telegraph-wire with the copper, and the end B with the zinc, and the needle moves to the left. When the handle is moved to the right, it shifts the cylinder or bridge so as to establish a communication between A and the zinc, and between B and the copper; and the needle moves to the right. When the handle is placed vertically the current is cut off from both wires.

It only remains that an arrangement be made between the parties in Edinburgh and London, as to *the signification* of these deflections of the needle. This having been settled, the message-sender in the metropolis, seated before his dial, moves the handle which determines the transmission and direction of the electricity along the wires. Every motion of the handle to the right or to the left causes the index-needles at London and Edinburgh to move simultaneously to the same sides. We may suppose, for example, that an answer in the negative is to be telegraphed from London to an interrogation from Edinburgh. It has been prearranged that one movement of the needle to the left shall signify N, and one to the right, O. The respondent accordingly moves his handle to the left; thereby transmits the current of electricity in such a direction as to move the index-handle at Edinburgh to the left also; and so represents N. He then places the handle vertically so as to cut off the current, and permit the needle to resume its vertical position; and, after a brief pause, carries his handle to the right, which moves the Edinburgh needle also to the right—which indicates O, and thus completes the answer.

The signal-dial at London is not essential, if London is not to receive messages; but as it must be provided with a view to their reception, it is so arranged that the electricity moves its index-needle before it passes on to Edinburgh. The party transmitting a message, has thus figured before him deflections of the index-needles, identical with those which his correspondent is watching and deciphering, at the same moment, hundreds of miles away.

Only two movements, it will be observed, can really be effected; but it is easy to make them represent the whole alphabet, and to telegraph rapidly, although every word be spelled letter by letter. Man, moreover, is by his natural-history definition one of the bimana. Two dials can therefore be arranged side by side, with coils and index-needles for each, and handles to be managed by either hand. Four movements are thus made possible; and for most purposes these supply an ample abundance of signals. It does not, however, form part of our present purpose to explain these—as their employment to represent letters, numerals,

words, paragraphs, or the like, is quite arbitrary, and involves nothing electrical. We give a specimen, however, of one of the telegraph alphabets :-

A, one movement to the left.	N, one right.
B, two left.	O, two right.
C, three left.	P, three right.
D, four left.	Qu, four right.
E, one left, one right.	R, one right, one left.
F, one left, two right.	S, two right, one left.
G, one left, three right.	T, three right, one left.
H, two left, one right.	U, one right, two left.
I, two left, two right.	V, two right, two left.
J, two left, three right.	W, three right, two left.
K, three left, one right.	X, one right, three left.
L, three left, two right.	Y, two right, three left.
M, four left, one right.	Z, one right, four left.

We have provided hitherto only for messages being despatched from London. To secure Edinburgh the same privilege, it is only requisite to deposit a battery there also, and to attach one of the wires from the battery (controlled by the handle for reversing and arresting the current) to the coil round the magnetic needle, and the other wire to the telegraph-wire with which the coil is not connected, as more fully described with reference to the London arrangement. If intermediate stations are to receive messages, then one of the telegraph-wires is cut across opposite the station, and an insulator of porcelain inserted between the divided surfaces. A thin wire is then soldered to the main wire on one side of the insulator, led into the station, covered with thread wound round the magnetic index-needle, and led out again and soldered to the main wire on the other side of the insulator. This arrangement is equivalent to a loop on the telegraph-wire; and it must be bent so that the current shall flow in the same direction, round the intermediate station-needles as it does round the terminal ones, otherwise the indices will not be moved to the same side by the same electrical current. A battery at each station, with wires connected in the way already described, enables it to send messages in its turn.

From what has been said, it will be understood that signals telegraphed from any one station to any one other, will be contemporaneously exhibited at every station. For the whole of the stations are included in one circle of conductors, which carry the electricity round all the indicating apparatus within its circuit; and the current cannot move one index without moving all. It is impossible, therefore, if a common alphabet be used along the line, to conceal from the whole of the stations what may be intended only for one. All that can be done, unless a separate series of wires or other conductors were supplied for every station, is to signify what place the message is directed to, so that other stations need not be at the trouble of deciphering the signals.

In addition to the arrangements for producing and interpreting signals, it is plainly necessary that we should also have some contrivance for calling the attention of the parties in attendance to the dials, when a message is about to be sent. For this purpose, warning is given by a bell, which a very ingenious application of electricity is made to ring. Electric currents not only deflect permanent magnets, such as the compass-needle, but confer magnetism upon non-magnetic iron. If a copper wire, therefore, be coiled round a rod of malleable iron, and a current of voltaic electricity be sent along the wire, the rod becomes a magnet so long as the current passes; and loses magnetism when the current ceases. This magnetizing power of electricity is turned to account in the telegraph. An ordinary alarum, or the striking machinery of a common clock, wound up so that the hammer would strike and ring the bell if one of its wheels were not locked, is placed at every station. But this wheel is only locked by an iron rod which is balanced on a centre, and so arranged that one end falls into one of the notches between the teeth on the circumference of the wheel. The other extremity of the rod is placed opposite, and close to the ends of a horse-shoe of malleable iron, which is surrounded by a coil of covered copper wire closely twisted round it, and connected by its ends with one of the telegraph-wires. And now, if a current of electricity be sent along the telegraph-wire, it circulates round the horse-shoe, and converts it, for the time, into a powerful magnet, which accordingly pulls towards it the free extremity of the iron rod, and thereby shifts the other end out of the notch in the toothed wheel. The bell immediately begins to ring, as the unlocked wheels revolve by the action of a spring or a weight; but as soon as the current is stopped, the horse-shoe ceases to be a magnet; the rod is no longer attracted, but falls back into the notch and stops the bell. Under this arrangement, the bells at every station would ring simultaneously, although only one was intended to be warned; and the current that rings the bells would also move the index-needles, though only for a moment. On most telegraph-lines, however, a separate set of wires is now provided for the bells, so that they are rung without affecting the needles. A separate wire, also, is sometimes furnished for every station, so that each bell can be rung independently of the others; but such arrangements necessarily add much to the cost of the entire telegraph.

The magnetizing power of electricity is also applied to produce visible as well as audible signals. The following is one of many such arrangements. A horse-shoe which becomes alternately magnetic and non-magnetic, as an electrical current does, or does not, circulate round a copper wire coiled about it, alternately lifts and lets fall an iron lever, which, like the beam or piston of a steam-engine, gives a rotatory motion to a wheel. This wheel carries an index which travels over a dial, round which the letters of the alphabet are engraved. The current must be alternately interrupted and continued to keep the wheel revolving. When the current passes along the wire, the index moves from the letter at which it is pointing, to the next. The current is then cut off; and, when it is restored, the index moves on to the succeeding letter. A key, like those of the organ or piano—alternately depressed and

allowed to ascend—furnishes the means of interrupting and renewing the current. This arrangement has been called the step by step telegraph; as for each touch of the key the index makes only one step; namely, from the letter it is at, to the next. It has the convenience, too, of using the old familiar alphabet, instead of arbitrary deflections of needles, and is alleged to possess other advantages, which will presently be referred to.

A third method of electric signalling, which promises well, but has not as yet been fully tried, is to effect chemical decompositions by the current. One such electro-chemical process is the following. A ribbon of paper, soaked in an acid solution of the yellow prussiate of potash, and pressed upon by two metallic springs placed side by side—which are in connection with the telegraph-wires—is wound off a roller by a piece of clockwork. When the current circulates, it passes, according to the direction in which it is sent, by the one spring or the other, across the wet ribbon, and decomposes the salt with which it is impregnated, producing blue marks at either of the points where the spring touches the paper. The blue spots or lines thus produced are longer or shorter, in proportion to the period during which the current flows, and at the one side or the other of the ribbon, according to the spring by which the electricity passes; and these blue marks or lines may be made to represent letters, according to their length and position on the paper. Their variations in both respects are determined either by the movements of a handle at the station sending messages, by means of which the current from a battery is interrupted, renewed, or reversed at pleasure; or by a mechanical arrangement of great ingenuity, which we have not left ourselves room to describe.

Lastly, it may be mentioned, on this topic, that, from the first, much attention has been directed to the arrangement of an apparatus which should print as well as signal its messages. Many beautiful contrivances for this purpose have been devised and tried—and in no long time we may expect to see some of them in use. Descriptions of them, however, would scarcely be intelligible without drawings; and their consideration may be deferred till their adoption is ratified by public approval. The question, What is the best method of applying electricity to produce signals? is at present undergoing the keenest discussion; nor will it be speedily settled. The telegraph has not been long enough in use to enable us to decide what arrangement is best; but all competent parties are satisfied that, wonderful as its achievements are, they will yet be greatly exceeded. Our immediate object, however, is to record its present condition, not to speculate on its future improvements.

In the preceding description we have purposely referred to the simplest and most easily understood form of electric telegraph, where there is a wire reaching from the terminus at the one end of the telegraph-line, to the terminus at the other, and *back again*. In actual practice, however, one half of the wire is now commonly dispensed with, and its place supplied—by the earth! A century has elapsed since the very curious discovery was made, that the electricity of a charged Leyden jar or battery will pass instantaneously through a great length of moist earth. Voltaic electricity has more recently been discovered to possess the same power; and advantage has been taken of it in the following way. A wire is led from the last copper plate of a battery placed, let us suppose at London, along the telegraph posts, in the way already described, to Edinburgh, and is there bent backwards towards London. Instead, however, of being carried along the posts a second time, the wire is now cut short and soldered to a large plate of metal, which is buried in the ground at some little depth. A comparatively short wire is also attached to the last zinc of the London battery, and soldered to a metallic plate which is likewise buried in the ground. The arrangement is equivalent to a great gap or breach several hundred miles long, in the double wire, filled up by moist earth. When the battery is in action, the electricity (positive) flows from the copper along the wire to Edinburgh, descends there to the one earth-plate, (as it has been called,) passes from it through the earth to the similar plate near the London station, and from it reaches the zinc of the London battery. The circulation of the electricity in this way is found to be even more rapid than when the double wire is furnished for its passage.

Good people have perplexed themselves with speculations as to why the electricity never wanders, misses its road, or fails to find its way back. But, as has been implied already, in the case of the double wire, electricity, like a prudent general, always takes care that a retreat be provided for before it begins its march. Till an unbroken circuit of conductors connect the terminal plates of the battery, no electricity can be set free. It is not essential, however, that those conductors should be metallic; a column or stratum of moist earth, we have seen, will do quite as well as an iron or zinc wire. One half in length of the connecting conductors must, however, be insulated; so that the electricity may be compelled to travel to the farthest point to which messages are to be telegraphed. But the other half of the conductors need not be insulated, and cannot be too large. The quicker the current can pass the better; and it will pass most quickly when conveyed by one or other of the two great electrical conductors which man has at his disposal—the solid mass of the globe, and the ocean with its tributary waters.

The last allusion leads us directly to the Marine Telegraph. It requires, however, no detailed description—as it differs from the Land Telegraph only in having the space between the buried plates occupied by water instead of by earth. Broad estuaries or channels do not permit the insulated wire to be carried across by bridges. The wire therefore proceeding from the

copper end of the battery is embedded in gutta percha, or any other water-proof insulator, and sunk in the waters to a depth sufficient to secure it against fishing-nets, ships, anchors, or large sea animals.

In this way it is conveyed from one shore to the other, and bending backwards after beng connected with the index needles, terminates in a broad plate of metal sunk in the waves, close to the further shore. A second uninsulated wire proceeds from the zinc end of the battery to a metal plate sunk below low water mark, at the side from which the insulated wire set off. Between the immersed plates on the opposite shores the mass of water, though ever changing, acts in relation to electricity as if it were an undisturbed gigantic metallic wire. Theoretically, there is no limit to the ocean spaces which electricity may traverse in this way. Already, accordingly, schemes for telegraphing across the Atlantic and the Pacific have been triumphantly expounded to the wonder-loving public.

One of these, whether hopeless or not for immense distances, is so very ingenious, and so likely to succeed across limited spaces, that we cannot pass it unnoticed. It dispenses, except to a very trifling extent, with wires, and carries the current *both ways* through moist earth and water. It is desirable, for example, to telegraph from the right to the left bank of a broad river. From the copper end of a battery on the right bank, a wire is carried to the shore (on the same side) and soldered to a plate buried in the river below water mark. A wire is also led from the zinc end to a long coil of wire which ends in a metallic plate. This likewise is buried in the river below water mark on the same right bank —but at a distance from the battery *considerably greater* than the breadth of the river across which signals are to be sent. On the left bank two plates are immersed opposite those on the right bank, and connected by a wire. The electricity, on leaving the battery, has therefore the choice of two paths. It may either keep entirely on the right bank, passing from the one buried plate on that side to the other, and so back to the battery by the long coiled wire; or it may cross to the left bank through the water, traverse the wire on that side, return across the water to the right bank, and regain the battery by the shorter coiled wire. The Thames, as we learn, has been actually crossed by electric currents in this way; the resistance to their passage by the water between the banks being less than that between the ends of the wires on the right and left bank respectively. A wire stretched from Land's End to John O'Groat's House, would indeed measure but a small portion of the breadth of the Atlantic —but by twisting the wire into coils, we might include in a short space an enormous length.

It remains to consider some of the imperfections which attend the electric telegraph, and considerably limit its useful application. When it was first suggested as a substitute for the optical telegraph, which was useless in dark nights and in fogs or snow-storms, it was confidently anticipated that the system of electric signals would be available in all states of the weather. But this expectation has proved fallacious. For hours together the telegraph will not work. This failure is sometimes owing to the insulation of the wires along the poles having for the time been destroyed by moisture. The porcelain insulating tubes, however, are now made of such a shape, and so well protected from rain by sloping covers, that non-insulation from moisture occurs much more rarely than might be expected. There are certain damp fogs, however, or mists, which penetrate everywhere; and so thoroughly wet the porcelain tubes, that they become conductors of electricity. In those circumstances it travels from the battery no further than the first wet post, down which it passes to the earth, and returns, *re infecta*, to the battery.

But a much more troublesome cause of inaction, or of irregular action, in telegraphs, is the influence of atmospheric electricity upon them. The door left open that the friend may enter, stands open also for the foe. The insulated wires stretched along the telegraph-posts for hundreds of miles, in order that a special current of electricity evolved by a battery shall travel only in one direction, cannot, like a private road, be barred against electricity evolved from other sources. Nor is this all. When the electrician wishes to collect atmospheric electricity, he insulates a metallic wire, and suspends it in the air. In other words, he acts exactly as the constructer of the telegraph does, though with a very different object in view. The latter, much against his will, finds that his wires not only permit, but invite, atmospheric electricity to employ them as a highway. They act, in short, as lightning-conductors; and lead the formidable meteor into every station, where it deranges or destroys the coils and magnets, and occasionally menaces buildings, and even life, with destruction.

To guard against these serious evils, lightning-rods, descending to the ground, are fixed at intervals to the telegraph-posts, and at the station-houses. The sharp spikes in which these rods terminate above, being elevated considerably beyond the telegraph-wires, present points of attraction to the electricity of the clouds, so that it is determined to them rather than to the less exalted and unprojecting wires. It is thus transferred from the atmosphere to the earth without affecting the telegraph. The rods in question, however, only protect the wires in their immediate neighborhood, and that ineffectually.

An additional and more effectual mode of protection is to place a knob of metal on each wire where it crosses the posts. A second and lower knob is then placed close to the first, but without touching it, and connected with a wire led down the post to the ground. If the lightning discharge ran along the wire, it would be cut off at the first knob it reached on the line, on reaching which it would leap across to the lower knob, and descend

to the ground—while the current from the battery is found not to have sufficient intensity to overleap the space between the knobs, and hence does not descend the wire—as it would do if the knobs touched.

An additional and very ingenious device against lightning-shocks injuring the station-houses, consists in making one part of the wire which is led off to them from the main line very thin. If a powerful electrical discharge reach this, it melts it; so that the lightning, like an enemy too hasty in pursuit, burns the only bridge by which it could cross to make an attack, and remains on the safe side—out-generalled by itself.

By one or other, or all of the methods described sufficient protection can, on the whole, be secured, against the more familiar and more perilous effects of atmospheric electricity. Electrical disturbances, however, of a kind which do not manifest themselves in discharges of lightning, or involve life or ordinary property in danger, are quite sufficient to derange the operations of the telegraph. During snow and hail-storms, whilst dry fogs are prevailing, when the aurora borealis appears, and in truth during most meteorological changes, much electricity is developed in the atmosphere. It is sometimes directly transferred to the telegraph-wires, but as frequently its action is only indirect. A body in which free electricity is in any way developed determines a similar electrical condition in an insulated mass of metal near it, exactly as a magnet induces magnetism in pieces of iron placed in its neighborhood. Thus an electrical cloud floating along above the extended wires generates a current of electricity in them; or, to speak more strictly, causes the electricity naturally present in a latent state in the wire, to become free and move along the metal. The currents which thus travel, as well as those which are directly transferred from the atmosphere, have the same effects on the index-needles and signal-bells, as the electricity purposely sent along the wires from the battery. The needles are swung unceasingly to and fro, or remain for hours deflected to one side. The bells ring violently at irregular intervals, or stop only when their weights are run down. Signals cannot be transmitted at all when atmospheric electricity is thus largely developed; and they become more or less confused whenever it is sufficiently powerful to affect the index-needles.

Apart altogether from its practical importance, there is something exciting in the contemplation of these strange atmospheric influences. It must be not a little startling to the drowsy occupant of some solitary telegraph station, to be roused from his midnight slumber by the spectral clanging of his signal bell, bidding him quail at the wild quiverings of the magnets, now swayed plainly by no mortal hands. An imaginative man might then well recall the legends which tell of disembodied souls sent back to this earth, to divulge some great secret of the world of spirits, and seeking in vain for means of utterance which shall be intelligible to those in the body. A philosopher, too, might accept and interpret the legend. For it is sober truth, that the apparently aimless and meaningless movements of the magnetic-needles when vibrating at such times, are, after all, the expressive finger-signs of a dumb alphabet, in which nature is explaining to us certain of her mysteries; and already, too, we are learning something of their significance.

Peculiar difficulties have attended the transmission of electric signals through some of the railway tunnels. Those have been traced, in some cases, to the effect of the moisture trickling down the walls in destroying insulation; and the wires have in consequence been coated, like those of the marine telegraph, with gutta percha. In other cases the index-needles at the stations nearest the tunnels have remained set to one side for considerable periods. This has been referred to the influence on the tunnel wires of electrical or magnetic disturbances in the strata in the neighborhood of the tunnel. If this view be well founded, it would be wise to make the telegraph-wires, where they pass through the tunnels, of copper, and not of iron—as the non-magnetic character of the former metal makes it less susceptible of electrical excitement. A wire cannot be magnetic and electrical in the same direction at the same time. If a telegraph-wire become magnetic in the direction of its length, like a long compass-needle, it will resist the passage of comparatively feeble electric currents, which would have traversed it had it been non-magnetic. This fact, perhaps, has not been sufficiently considered in the explanations which have been given of the derangements of the telegraph. Iron becomes so readily magnetic that the telegraph-wires, when made as they are now of that metal, cannot in certain circumstances escape being magnetized by the earth. Now that railways are projected in India, it may not be amiss also to notice that near the Equator iron rods or wires lying north and south after a time become magnetic. And wherever, in other regions, the wires are extended in the direction of the magnetic dip, the same effect will occur. The cheapness, elasticity, and strength of iron, however, more than counterbalance the inconveniences referred to.

The defects referred to in the electric telegraph we have been considering, we may soon expect to see lessened, since so many accomplished men are strenuously seeking to remedy them. The step-by-step, the electro-chemical, and the printing telegraphs are less liable to disorder by atmospheric influences than the magnetic-needle arrangement, which is chiefly in use at present. Their merits, however, have been but lately brought before the public; nor have they been tested for any long period on the large scale. It will be enough, therefore, if we cordially wish them success.

Meanwhile, if our electric telegraph is not perfect, as no tool of man's is, it assuredly is a most wonderful instrument; and it has been brought from small beginnings to its present completeness in a singularly short period of time. To unscien-

tific observers, indeed, the rapidity of its development cannot, we think, but seem miraculous. Like some swift-growing tropical plant, it has spread in a few months its far-stretching iron tendrils throughout the length and breadth of the land. It would have done so, however, twenty years ago, had the mechanical conditions for its extension existed;—and we must thank the railroads for its early maturity. Till they provided a secure pathway for its progress it could only exist in embryo. It now fringes every railway with its harp-like wires—apparently as inseparable and as natural an appendage, as the graceful parasitical orchideæ which spread along the branches of the South American forest trees.

Nursling, however, as the electric telegraph is of this century, almost of this decade, an ingenious pupil of Niebuhr might find in an ancient tradition its birth foretold centuries ago. In the year 1517, as the historians of the Reformation tell us, the Elector Frederick of Saxony had a strange dream. The monk Luther appeared to him, writing upon the door of the palace-chapel at Wittemberg in his dominions. But the pen which Luther handled was so long that its feather-end reached to Rome, and shook the Pope's triple crown on his head. The cardinals and princes of the empire ran up hastily to support the tiara, and one after another tried in vain to break the pen. It crackled, however, as if it had been made of iron, and would not break; and whilst they were wondering at its strength, a loud cry arose, "And from the monk's long pen issued a host of other pens."

The Elector's dream has been fulfilled in our own day. The long pen of iron sprouting forth hosts of pens is in our hands; and every day grows longer. It *has* reached to Rome, and much further; and shaken popes and kings, and emperors' crowns; and foretold, like the pen which Belshazzar saw, the fall of thrones and the ruin of dynasties. It has written much of wars and revolutions, and garments rolled in blood; and must write much more. But it is the emblem and minister of peace—and the Long Pen shall yet vanquish the Long Sword.

From the Journal of Commerce.

HOUSES FOR CALIFORNIA.

The rapid settlement of California under the influence of the gold fever has given rise to a traffic of a novel character, namely, the exportation of dwellings, hotels, churches, and buildings of every description, framed, and ready for erection upon their arrival at their destination. From Boston, Maine, and various parts of the Eastern States, we hear of individuals or companies largely engaged in house-building for California, or exporting lumber—while from this city and vicinity it may be safely estimated that not less than 5000 buildings have been sent out since the commencement of the "excitement," or are now under contract. Doubtless many fortunes will be made, and perhaps not a few lost. Still, 50,000 or 60,000 men, with constant accessions to their numbers, suddenly landed in an inhospitable territory, most of them destitute of even the semblance of a habitation, may be expected to create a demand for dwellings not easily supplied. We have heard of one of Naylor's houses, through a private letter, which cost here $340, bringing in California $5,000. These houses are of galvanized iron. Their surfaces being bright, the rays of the sun are refracted, and the temperature within kept at a much lower degree than it would otherwise be. Not far from 600 such buildings have been sent out since 1848, including 9 stores or warehouses for the U. S. government—some of them of large size—30 or 40 for Mr. Penix, of Valparaiso; an equal number for Messrs. Howland & Aspinwall; 15 for Thomas O. Larkin, of San Francisco; 15 or 20 for Mr. Boardman, also of San Francisco; 50 for M. Y. Beach & Son; also, a hotel for Livingston & Wells, to be called "The Iron Hotel," which was taken across the isthmus. An order for 30 or 40 more is being executed, for Mr. John Parrot, U. S. minister at Mazatlan.

In the building of frame houses, six or eight firms are pretty largely engaged, in this city and Brooklyn. Spaan & Co., No. 11 Park Row, have shipped, for various firms in the city, 100 portable section houses, built on their plan, to be carried over the isthmus on pack mules; also, 175 houses, of sizes varying from 12 feet by 16 feet, to 90 feet by 65 feet, and from one to three and a half stories in height, for shipment around the Horn. There remain to be sent, by this firm, something over 100 houses, belonging to various parties, among which is a large hotel, three and a half stories high, 180 feet front, and 90 feet deep, to be erected at San Francisco, under the name of the Astor House. It will have 100 rooms, 10 stores on the second floor, and a wide, ornamental entrance. The plans will shortly be exhibited at the Merchants' Exchange. Another building, of a similar character, is constructing, three stories high, and 30 by 65 feet, for a Frenchman, recently from Illinois. The average cost of the dwelling-houses is about $400.

Messrs. Robbins & Treadwell, No. 111 Broad street, have built 450 or 500 houses, most of them a story and a half in height, and 15 by 25 feet. About 120 are now in progress for Capt. Billings, who is also having 80 others built by S. P. Lincoln, of Brooklyn, costing $150 or $200 each. Among them is a bowling-alley, 20 by 70 feet, built by Mr. Robbins; also two hospitals. They will form the cargoes of the ships Sartell and Laurens, the former of which sails next week. The same parties are building 120 houses for Capt A. Miner, with which to freight the ship Diadem to sail in a week or two. They are accompanied by a kind of mineral pigment, called Beman's Cottage Paint, which is alleged to possess qualities making it superior to ordinary paints, and is withal much cheaper. It cannot fail to impart to the clusters of California villages a grotesque and pleasing effect, by its greatly varied shades of color.

Mr. S. P. Lincoln is building a hotel for Messrs. Churchland and Whittemore, to cost about $1000, and to be completed five days after the commencement of the work. It is 60 by 30 feet. Attached to it is a kitchen, 15 by 30 feet. It goes out in the ship Rowena. The ship Hampden, last week, took out a hotel for Henry Elliott, 30 by 40 feet, with panelled doors, shutters, &c. Four houses have also been made for Mr. Warburton, president of the Hartford Bank, and ten for Dr. Hulse; also a hospital for Mr. Morris, and seventeen dwellings for Mr. Elliott. Mr. Denn a is connected with

another firm, at No. 50 Broadway, which has gone pretty largely into the house-building business. Their sales, thus far, are not less than $40,000.

From a Correspondent.

We are so fortunate as to be located in a section of the town where large numbers of Chinese have pitched their tents, and we have remarked with much interest the character and habits of these people. From early morn until late in the evening, these industrious men are engaged in their occupation of house-builders, of which a great many have been exported from China, and the quietness and order, cheerfulness and temperance, which is observable in their habits, is noticed by every one. Search the city through and you will not find an idle Chinaman, and their cleanliness exceeds any other people we ever saw.

The buildings brought from China are generally 20 feet square, one story in height, and 12 feet from the floor to the ceiling. The timbers are round, and many of them very crooked. We have noticed, in several instances, the erection of China buildings of double the size described above—but we suppose that in such cases two separate frames are erected together, thus forming a single building. The first movement after raising the frame is to attach the window, which consists of a frame and blinds, without sash. The blind is so constructed as to close itself by its own weight—the slat being of double width outside. The timber is very uniform in size, and about six or eight inches in diameter. The boards are well seasoned, and resemble American cedar. The price of a Chinese building, such as we have described, including the erection, is $1500. The building, however, consists of simply the frame and covering. They are brought from Hong Kong.

AUTUMN.

BY WILLIAM ELLERY CHANNING, OF CONCORD.

A VARIED wreath the autumn weaves
Of cold gray days and sunny weather,
And strews gay flowers and withered leaves
Along my lonely path together.

I see the golden-rod shine bright,
As sun-showers at the birth of day,
A golden plume of yellow light,
That robs the day-god's splendid ray.

The aster's violet rays divide
The bank with many stars for me,
And yarrow in blanch tints is dyed,
As moonlight floats across the sea.

I saw the emerald woods prepare
To shed their vestiture once more,
And distant elm-trees spot the air
With yellow pictures softly o'er.

I saw an ashburn scarlet red
Beneath a pine's perpetual green,
And sighing branches hung their head,
Protected by a hemlock screen.

Yet light the verdant willow floats
Above the river's shining face,
And sheds its rain of hurried notes,
With a swift shower's harmonious grace.

The petals of the cardinal
Fleck with their crimson drops the stream,
As spots of blood the banquet-hall,
In some young knight's romantic dream.

No more the water-lily's pride
In milk-white circles swims content,
No more the blue weed's clusters ride,
And mock the heaven's element.

How speeds from in the river's thought
The spirit of the leaf that falls,
Its heaven in this cold bosom wrought,
As mine among these crimson walls.

From the dry bough it spins to greet
Its shadow on the placid river,
So might I my companions meet,
Nor roam the countless worlds forever.

Autumn, thy wreath and mine are blent
With the same colors, for to me
A richer sky than all is lent,
While fades my dreamlike company.

Our skies grow purple—but the wind
Sobs chill thro' green trees and bright grass,
To-day shines fair, and lurks behind
The times that into winter pass.

So fair we seem, so cold we are,
So fast we hasten to decay;
Yet through our night glows many a star,
That still shall claim its sunny day.

From the New York Evening Post

THE HOURS.

THE hours are viewless angels,
That still go gliding by,
And bear each moment's record up
To Him who sits on high.

The poison or the nectar,
Our heart's deep flower-cups yield,
A sample still they gather swift,
And leave us in the field.

And some fly by on pinions
Of gorgeous gold and blue,
And some fly in with drooping wing
Of sorrow's darker hue.

And as we spend each minute
That God to us hath given,
The deeds are known before his throne—
The tale is told in heaven.

And we, who walk among them,
As one by one departs,
Think not that they are hovering
Forever round our hearts.

Like summer bees that hover
Around the idle flowers,
They gather every act and thought,
These viewless angel hours.

And still they steal the record,
And bear it far away;
Their mission flight, by day or night,
No magic powers can stay.

So teach me, Heavenly Father!
To spend each flying hour,
That, as they go, they may not show
My heart a poison flower.

Pittsfield, Sept., 1848. ORIOLE.

CHAPTER VI.—THE JESUIT'S STORY.

"As nearly as I can recollect," he said, "it was in the month of May; and the spring, always beautiful in these Alpine regions, appeared to have come forth with tenfold splendor. The sun's warmth, in that season of the year, thaws the mind as well as the earth. People put on sportive looks for the summer, and the joyousness of their feelings is represented externally by bright-colored clothes. Suddenly the clouds gathered, and hung from ridge to ridge, entirely roofing over the valley. Through tunnels, as it were, in their substance, the thunder rolled incessantly; while the lightning flashed downwards, with a brightness so vivid and piercing, that it threatened to consume, utterly, both man and beast. Then followed indescribable torrents of rain, descending as from the open windows of heaven, until every brook and streamlet swelled to a torrent, and the Rhone rushed through its bed with tremendous force and velocity. In the midst of the storm, a noise was heard in the mountains, compared with which the thunder shrunk into a whisper. It appeared as if the foundations of the everlasting hills had been violently shaken from their place. All the villagers hurried to their doors, where they stood, pale and trembling, not knowing what to do. Then came another frightful crash. The curtain of rocks which you behold yonder, disparted from top to bottom; and out rushed an irresistible flood, with a roaring like that of the ocean. There was no time for flight. Terror paralyzed all limbs. Onward swept the torrent, ploughing up the plain in various directions, flooding the fields and the gardens, overthrowing walls and houses, and hurrying forward their ruins towards the Rhone. Several hundred persons were drowned in a moment. But some, who happened to be in situations favorable for flight, escaped destruction.

"There was one cottage, inhabited by an old man and his daughter, which stood near the brink of the great chasm, through which the principal arm of the waters was roaring and foaming along. The channel was widening fast by the earth crumbling into it; and it was evident the cottage must go in a few minutes. A young brother of our order stood on the opposite bank, beholding with pity the young woman wringing her hands, imploring pity and assistance. Her father, ill and feeble, had tottered to the door, where, seeing death around him on all sides, he stood transfixed like a statue. His daughter now approached, and now retreated from him, looking wildly towards a small group on the opposite bank. What she said could not be heard, as her voice was drowned in the thunder of the torrent. But our brother formed his resolution. A pine tree, lopped and barked, lay near him on the ground; he entreated the bystanders to lend their assistance in throwing it across the chasm. When they had done so—rounded, slippery as it was—he made his way over it, while the water, rising every instant, threatened to carry it away. He approached the father and daughter. What words he used were never known; but he seemed to be persuading the young woman to allow him to save her life. She, however, pointed to her father, and shrunk from the deliverance she was not to share with him.

"A young man, emboldened by the example of the Jesuit, now passed over the pine, for the purpose of aiding in the pious work of preserving the father and his loving child. All saw there was no time to be lost. The rain descended in floods, the furious stream increased momentarily, the pine began to be touched and shaken by the waves; and the villagers, who looked on in comparative safety, soon felt how little hope there was of deliverance for their neighbors. They lifted up their hands to heaven—they prayed for them; but the storm seemed to beat down their words, while their hopes were swallowed up in the dark wrath of the elements. The little group now approached the pine—the father and his supporter advancing first, and our brother and his beautiful companion following. Most true it is that 'the race is not always to the swift, nor the battle to the strong.' The man of years and feebleness, against all hope and expectation, reached the shore in safety. But at the very moment his foot touched the land, a stream of whirling eddies struck the pine, swept it forward, and plunged the Jesuit and the girl into the boiling flood. Danger produces, sometimes, a strange effect upon the mind. Instead of quitting his hold, and striving to make for the bank, our brother clasped his companion in his arms; and they sunk together. Some days afterwards, their bodies were found far down in the channel of the Rhone, fast locked together in the embrace of death. We buried them in the same grave; and the good old man, her father, still lives to visit the spot where the once warm heart of his child lies cold. It will not be long before he joins her in the grave, because he is old and feeble, and has nothing in this world to support him. But he is a pious Christian, and hopes to be greeted in heaven by the soul of his beloved daughter, as well as by him who lost his life in the endeavor to save her. I tell you these facts," said the Jesuit, "without ornament or amplification. In itself it was a very touching thing to see, though it is little or nothing when related."

CHAPTER VII.—SLEEP AND JEWELS.

In the inn at Brigg, which we reached early in the evening, we found a number of English people, who, however, kept all together, and held me out no temptations to join them. It is a fact, which most persons must have observed, that the moment a man leaves his own fireside, he strives, by putting on grand airs, and otherwise, to pass for what he is not. He alters the tone of his voice, throws additional dignity into his aspect and gait, and, if he expects to be overheard, dis-

courses on topics calculated to display his consequence. Most travellers do this, rendering themselves thereby extremely disagreeable. For myself, at least, I hate people of consequence, and prefer conversing with the ragtag-and-bobtail of society; persons altogether without pretensions, without titles, and, often, also, it is to be presumed, without cash—these are your truly merry companions on a journey. The Roman poet says, "The poor man sings in the midst of thieves, because he has nothing to lose;" and travellers who are very nearly in that predicament usually take things easily, and rely confidently on Providence to provide them with breakfast, dinner, and a diligence.

As I have said, I did not make up towards my countrymen, because they appeared to be of far too much consequence for me. It was years since I had been in England; and I, therefore, was not at all familiar with the current topics of the day. Our countrymen, of course, are all politicians. Not that, as a rule, they understand politics, but that it is the most exciting topic with which they are acquainted. They now talked of the principal notabilities of the day, whose names, though sufficiently respectable, need not be repeated here. Political reputations are easily built up, especially in England; where any man of family or fortune, with a slight dash of industry, and a very moderate amount of perseverance, may get credit for all manner of public virtues. He has but to select a hobby-horse for himself, and to ride it with moderate steadiness, to be set down for a great patriot, and be looked upon as an adorable creature among the ladies of his party. Time, of course, squares his account with fame—that is, dissipates his pretensions into thin air, and leaves him overwhelmed amid the formless ruins of oblivion. But he is not the less a notability while he lives, and vanity always whispers in his ear that he will form an exception to the general rule, and be remembered forever.

I found myself at supper, purely by accident, beside Madame Carli, whom I had treated during the day with something like neglect; my attention having been absorbed almost entirely by the disciple of Ignatius Loyola. She was now resolved that I should do penance for my sins, and for some time would only converse with me in the most distant and formal manner. I am not the least in the world a materialist; but have still found by experience, that a good supper and sparkling wines produce a wonderful harmony in our microcosm, and incline us to gossip and philanthropy. What the dishes at Brigg consisted of, Heaven only knows. I never pry into mysteries of that sort; but eat, if I can, whatever is set before me, and am thankful for it. I only know that everything that evening seemed very nice, and that the wines were perfectly delicious. Monsieur Carli, since his arrival at Brigg, had made a discovery which discomposed him considerably, which was, that, having left France during the cholera, he could not, without the consent of the governments of Piedmont and the Valais, pass into Italy in less than a week. His behavior at supper put me strongly in mind of a butler in the service of the Margravine of Anspach. That lady, in whose history there were many little odds and ends with which she did not wish common fame to be acquainted, gave this same butler a guinea to hold his peace on a particular point; but the money took him to the tavern, where, drinking good wine with his friends, he grew warm and communicative, and related the very anecdote which her ladyship most especially desired to be forgotten. Hearing afterwards of his indiscretion, she reproached him, when he ingenuously replied, "Ah! your ladyship should not have given me money, but have let me remain sober; for I am exactly like a hedgehog—when I am wet, I open."

Monsieur Carli, until the wine began to soften his heart, had affected all the airs of a small diplomatist, and would, if possible, have made a mystery of the fact that the sun shines at noon-day. At supper his tongue grew supple, and scattered about confidence as a cow's tail scatters dew-drops in the morning from the grass. He professed great relish for our society, swore we were the best fellows he had ever met with, and said it would give him the utmost possible delight to travel round the world with us. Unfortunately, however, our intimacy was destined to be cut short at that luckless town of Brigg, unless—which was very unlikely—there was a gentleman in the party who happened to have a passport for himself and his wife, and yet had left his wife behind him. "In that case," cried M. Carli, in great animation, "he could take Madame under his protection, get her over the frontier as his own better-half, and then, of course, deliver her to me. For myself, I could easily climb the hills a little, and so step into Piedmont without a passport."

Events appeared to have framed themselves just as Monsieur Carli wished, for I happened to have exactly such a passport, except that it would have enabled me to take over the frontier seven other persons, in addition to his wife. When I mentioned this fact, and offered to take charge of Madame Carli, the little man was transported with joy, as a week at Brigg would, he owned, have been the death of him. Besides, he did not doubt that the cholera was close at his heels; and as it was to escape this fearful malady that he had hurried so rapidly out of France, there was nothing he would not have given at this moment to be lodged safely on the other side of the Alps. It was now agreed that Madame Carli should be Madame St. John till our arrival at Duomo d'Ossola.

While this arrangement was in the course of completion, Madame Carli and I were engaged in passing a separate treaty of peace. I had already atoned for the negligence of the day, by all sorts of submissions, till we were once more as free and gay as ever. This, of course, was partly owing to the supper and the wine, which put us first in good humor with ourselves, and then with every-

body else. We laughed and chatted, and appeared to have known each other from childhood, so familiar and easy were we together—I mean the whole group—Monsieur Morn, from Anjou—the young, nameless artist from Paris—the commercial traveller, and all. This last-mentioned gentleman was a curious specimen of the Parisian cockney. He was taking a magnificent set of jewels from a house in Paris to Maria Louise, the widow of Napoleon, at Parma; and the fear of being robbed prompted him to conceal his treasure. The vanity of having been entrusted with it overcame his fear, and he exhibited the jewels at the supper table. They were worth several thousand pounds; and when he had been guilty of the indiscretion, he repented of it, and began to tremble for the result. His throat, he did not doubt, would be cut before he reached his journey's end. In his eyes, every man around him became a robber; and when he restored the case to his pocket, he did so with blanched cheeks, and hands almost smitten with paralysis.

However, we presented a striking contrast with the little knot of Englishmen in another part of the room. They ate their supper, not exactly in silence, but in something nearly akin to it, muttering to each other every now and then between a growl and a yawn, and looked as if they would have preferred being snug in Cheapside or May Fair, or whatever other locality they belonged to. We, on the other hand, half intoxicated with animal spirits, made an immense deal of noise, and ultimately took refuge in cigars, to the introduction of which no one objected. I soon enveloped my fair companion in an aromatic cloud, which did not, however, in the slightest degree impede her utterance.

As the inn was crowded, it was necessary for us all, except the married couple, to put up with double-bedded rooms; and, as fate would have it, the commercial traveller, with his jewels, fell to my share. He was a young man of about twenty-three, with fiery-red hair and a blowsy face, short, slight, and eaten up with timidity and suspicion. In my long, drooping, black mustaches and ragged beard, he saw so many undoubted indications of the brigand—he would have given anything to have been Monsieur Morn's companion. But that was not to be thought of. Monsieur Morn's artistic friend was to be the sharer of his apartment; and so the young jeweller submitted to sleep on robbery with as good a grace as he could assume. Our beds stood each in a recess on either side of the door; and, long after I was comfortably between the sheets, I could hear my companion puffing, blowing, and fumbling about, and taking precautions for securing his treasure. No doubt he thrust the jewel-case under his pillow, and made up his mind to bawl lustily should I attempt to lay violent hands on him in the night. Being heartily tired, we both fell asleep. We were to start at half-past two, to commence the ascent of the Simplon. In the course of the night, the trampling of many feet on the stairs roused me from sleep; and, supposing it was time to get ready, I went over to awake my companion, who, strange to say, slept like a top. I had to shake him, and bawl several times, before I could perceive the least sign of returning animation. When he did at length awake, he gave a striking proof of his commercial education; for, supposing me to be a robber burst suddenly into the room, he cried out, in extreme fear and agony, "The man with the money and jewels is in the other bed!" A loud shout of laughter from me convinced him he had made a mistake. "So, my friend," said I, "you have no objection to get my throat cut while you can save your own. However, that is not the question just now. Get up; all the travellers are in motion—we must dress and be off." On ringing for a light, however, we found we had not yet been in bed full half an hour; so we enjoyed the luxury of a second rest, and sweet sleep, on which, if I were writing an epic poem, I would bestow as many fond and grateful epithets as Homer does. In fact, I am never weary of repeating, with Sancho Panza, "Blessed be the man who invented sleep! it wrappeth one about like a garment." So thought I and the commercial traveller, in the comfortable bedroom at Brigg. Still, between sleeping and waking there is always a short interval, which people, of course, employ according to their fancy. I generally, at such moments, build castles in the air; and most magnificent castles they often are, too, illuminated with beauty, and perfumed with "Sabean odors, from the spicy shores of Araby the blest." On the occasion in question there were two strange sides to my castle; the one consisting of a bright glimpse of home at Jolimont; the other of Alpine summits and sunny Italy. The room was full of thick darkness, save when a gray glimmer entered at the small casement, shaken occasionally by the wind. My Parisian Argus already slept over his jewels, as his snoring proved indubitably; otherwise there prevailed entire stillness in the house. Without, the notes of a distant screech-owl sounded through the air, intimating that she, at least, considers herself a fit companion for night, and ever meditates and listens to her own voice, albeit none of the sweetest. Visions of glaciers, and virgin snow, and piny chasms, and thundering cataracts, formed the avenue by which I approached the land of dreams, where I at length forgot all terrestrial things among the palm bowers of the distant Nile.

Whether we are happy or miserable, time goes on, at the old rate, and brings about the hour for parting, whether it be from the summit of bliss, or from the depths of woe. At half-past two, there was a knocking at every door in the inn at Brigg; and drowsy travellers shuffled themselves hastily into their clothes, in order to have as much spare time as possible for fortifying the inner man. An inn is generally a pleasant place; for, as soon as you open your bedroom door, the delicious steams of coffee and fried bacon greet your nostrils. Money is a glorious thing, for it sets all

the world in motion, and keeps cooks and kitchen wenches up half the night to provide for your enjoyment in the morning. Not that they think it a hardship; like the race-horse, they enjoy the sport, as well as the rider, and always find time, in some snug corner of the twenty-four hours, to get as much sleep as they stand in need of. Besides, there is an excitement in the operations of the kitchen, especially as they can always taste of the best, and that, too, before it is served up to you. There is, after all, nothing like a breakfast-table before a journey; and one would never grow weary of describing it, if it were not that it is exceedingly monotonous. On the thing itself, appetite confers novelty daily. You are not at all the less disposed to breakfast to-day because you breakfasted yesterday; whereas, in a narrative, one breakfast will generally do, by way of a specimen. At the same time, I must observe that there was considerable variety in our Alpine breakfasts. They sometimes comprehended broiled kidneys, mutton-chops, a slice of venison, delicious butter, honey, and eggs, with rolls hot from the oven, and coffee fit for the denizens of Olympus. A poet of the present day, not over-scrupulous about the sources of his inspiration, exclaims in one of his pieces—

> I'll not envy heaven's princes,
> While, with snowy arm, for me
> Kate the china tea-cup rinses,
> And pours out her best Bohea.

Had he known Madame Carli, he would have left out Kate, and tried to get her name into his verses, for most assuredly she presided over the coffee-pot like a sylph; and when she raised her arm, which was as white and round as any Kate's in the world, the sight of it added additional flavor to the Mocha. Let it not be forgotten that I was now privileged to admire her, since she was to be my wife as far as Duomo d'Ossola. However, even at that fatal breakfast-table, the jokes began which were to end by keeping my fair friend and her husband prisoners in the Alps. She was now addressed invariably as Madame St. John; and Monsieur Carli was complimented upon being a single man. The breakfast, nevertheless, went off pleasantly; the coffee was sipped, the rolls, butter, eggs, &c., eaten, and, even at that early hour, cigars were lighted, to enable us the better to encounter the keen air of the Upper Alps.

CHAPTER VIII.—THE INN AT BRIGG.

There is a pleasant and an unpleasant side to most things. Even making love to a pretty woman has its drawbacks. First, the foreknowledge that it must come to an end; and, second, the fact of having a multitude of rivals. With respect to inns, their delights go on rising like a flood tide, till you come to the disagreeable moment of calling for your bill. Then there is a sort of shiver in your purse, a kind of golden hysteric, occasioned by the approaching separation of the coin from its comfortable quarters. This, at least, is the way with most persons. For myself, I never wear a purse, but have a large open pocket, which lets out the money as a sieve does water—easily, and without pain. My theory, however, is, that you should treat gold as a stranger, according to the maxim of antiquity—welcome the coming, speed the parting, guest. If you have time to make its acquaintance, you are apt to get fond of it; and then shaking hands and bidding adieu are far from pleasant. Your intercourse should be a sort of omnibus intimacy, and never go beyond a nod, or a sort of civil greeting, which provokes no inclination to sigh in either party; you laugh as you meet, and laugh as you part, and there is an end of it. You should treat money as a landlord does his customer—that is, get as much as you can out of it, and then turn it about its business. Byron says, somewhere, that a great deal may be bought for fifty louis; and he was a good judge in matters of that sort. But foreigners generally treat money more affectionately than we do, hug it more tenderly, and kiss it on both cheeks before they can make up their minds to let it go, unattended, into the wide world. You would think they were animated by a sort of parental solicitude, and that they had felt the throes of maternity for every guinea in their purse.

At any rate, paying tavern reckonings—unpleasant to everybody who has the slightest attachment for mammon—is doubly disagreeable to the natives of the Continent, who all, on this point, foster a sort of socialist theory, formed from the practice in "Cabet's Icaria," that innkeepers should furnish you with whatever you want, gratis. In descending the stairs, I heard a fearful row in the kitchen; and, with the true propensity of a traveller, looked in, just to see what it was all about. The scene was excessively comic. At the further end was a man in a short shirt and red woollen nightcap, sputtering and foaming like a maniac, and struggling violently to disengage himself from the grasp of two women, who held him like vices, which, for aught I know, they were. Near the door stood the objects of his fury, Professor Morn, and his companion the artist. These gentlemen, not having had their equanimity restored by their good breakfast, or having suffered it to be again ruffled by the bill, were describing, in the most provoking terms, the wretched accommodation of their bedchamber. "If I had you in France," said the elder and more provoking of the two, "I would hand you over, as a '*mauvais sujet*,' to the police. You are, in fact, a common cheat." Then addressing me—"You shall be judge," he added. "What sort of bed you had, I don't know; but when we went up stairs, and had got fairly into ours, we found that a damp towel had been tucked along the top, in imitation of a sheet, and that the pillows and bolsters were stuffed with peach stones, which, as it was impossible to sleep, we amused ourselves all night in throwing at the bugs."—"But, Monsier," interrupted his companion, "my pillow was still worse, it palpitated with life; it was simply what in Paris we call a bag of fleas." Let not

the reader suppose that these communications were uninterrupted. At every particular the landlord roared out, "*Cochon !—vilain !—menteur !—chien !*" with other phrases equally complimentary, all the while making strenuous efforts to escape from the gripe of his wife and the sturdy Dulcinea who acted as cook to the establishment. "Pray, let him go," cried the professor, coolly; "I will soon beat him into good manners, as our armies did his country."—"Nay," I interposed, "that is ungenerous; it is no credit to France to have overcome Switzerland in war. Pray, settle the matter without diverging into politics."—"You are quite right," answered Morn, with the utmost good humor. "And now, you cut-throat," addressing himself to the landlord, "there is your money, which you deserve just as much as the man who stops one on the highway." So saying, he and his companion threw down the proper amount of francs and sous, and stalked haughtily out of the kitchen, in search of the diligence. Having settled with the waiter up stairs, I was enabled to attend to my fair companion, who had held my arm, without uttering a word, during the whole of the little dialogue above communicated.

CHAPTER IX.—THE PASSAGE OF THE SIMPLON.

I was never so much struck by the pitiful smallness of human dealings, as on stepping out of the inn at Brigg into the glories of an Alpine night. The mountains rose around in indescribable majesty, and the stars looked down upon us like the eyes of God from the sky. Everything in nature was vast and sublime. I was glad to have escaped, from bugs and bills, and vulgar objurgations, into the grandeur of this mighty theatre, which for a while absorbed my thoughts entirely. It was about half-past two when we started, shortly after which the atmosphere became overcast with clouds, which so completely obscured the stars and moon that we could see nothing. We had, therefore, to depend entirely on the resources of conversation, which commenced with a dissertation on peace, by a German traveller who joined us at Brigg. The work of the Abbé St. Pierre, edited by Jean Jacques Rousseau, had, it seems, fallen into his hands early in life, and made so great an impression on him, that he was now travelling about the world in the hope of making proselytes to his theory. Every man is respectable who is sincere; and, therefore, it would have been wrong to laugh at our pacific Don Quixote, who expected the speedy advent of the millennium—or rather the return, as he called it, of the golden age. Monsieur Carli was his first antagonist; but his education had been too oriental to give fair play to his logical powers. He, therefore, broke down speedily, and left the field open to my friend Morn, who defended vigorously, and, as it appeared to me, with success, the mission of the sword. I have, practically, all my life been a man of peace, and therefore my sympathies are, of course, ranged on the side of the spindle and the spinning-jenny; but I, nevertheless, entertain a profound reverence for the sword, which, like the ark of the covenant, is often not at all comprehended by those who bear it. It is, in itself, a sacred symbol—the symbol of justice, supported by might; and not, as is too often supposed, a vile instrument designed by Providence to work only the ends of despotism. That it has constantly been perverted, is too true; but let no free man be so far false to himself as to forswear his allegiance to this mysterious representative of liberty. The sword should glitter over every man's hearth; not that it may be ready to shed innocent blood, but that it may be wielded to protect that hearth, and the altars which ennoble and sanctify it. *Dulce et decorem est pro patria mori.* Death is our portion, whether we be bond or free, noble or ignoble. Of all common-places, none is so commonplace as this; yet are we slow to draw from it the inference that death in the service of liberty, on the red battle-field, when, by an upright and honorable life, we are prepared to die, is more desirable than the tranquil breathing out of our souls on a feather-bed in a close room. The reason is, that when we take up arms in a good cause, we are conscious of performing a sacred duty. God gave us life, not that we might preserve it at any price, but that we might know when and where to lay it down at his bidding. War, consequently, is not to be denounced because it occasions a great sacrifice of human life, for peace also occasions the destruction of life no less certainly or profusely; for from peace proceeds security—from security, false confidence—from false confidence, the too great increase of the population—from this too great increase, poverty and distress, and famine and pestilence, which dig more graves on the earth's surface than the most destructive wars. But it is not for the people to determine, in monarchies, whether there shall be war or peace. Kings and their ministers decide for the nation. This is an evil, because the war that arises out of their decision may be unjust. If so, however, there may be justice on the other side; and when force is employed for the perpetration of evil, force may surely be employed for the prevention of it. Consequently, if you demonstrate the wickedness of a war, considered from one point of view, you only prove how humane and defensible it is when regarded from the other side.

This, I own, however, was a strange topic to be discussed on such an occasion; and I voluntarily put an end to it by proposing that, as the diligence crept along at something worse than a snail's pace, we should all get out, and walk up the mountains. My proposition being approved of, we alighted; and, separating into couples, I got accidentally divided from Madame Carli. I selected in her stead one of our bug-bitten companions, who turned out to be a very agreeable fellow; and with him I walked on ahead. Never shall I forget that morning. Far in the distance behind us, the summits of the Bernese Alps, blanched with snow, pierced the sky, while the bright moonlight seemed to repose with pleasure on their cold, glit-

tering peaks. Towards the south-west the sight plunged down a series of dark valleys, partly lighted up by the moon, partly enveloped in shadow, while one solitary lamp from some window, perhaps in Brigg, sparkled like a star among the rocks below. Scattered masses of white, silvery vapor hovered over the distant valleys and lowlands far beneath, and looked like a broken floor, through which the moon's rays penetrated to the earth. Close by the road, chasms, which in the moonlight appeared of prodigious depth, wound along, while rapid torrents, whose white foam was once or twice visible between the dark pines, brawled and roared at the bottom. Here and there, vast conical mountains sprang up from these abysses, and their white heads, clothed with preternatural beauty by the moonlight, at once astonished and delighted the imagination. The stars shone with amazing brightness, and the constellation of the Great Bear, in particular, seemed to have a brilliance and beauty I had never observed before. But the exquisite beauty of the dawn surpassed everything. The snow-sprinkled peaks of the Alps now seemed to become transparent; while starlight, moonlight, and the pale yellow metallic brilliance of the sky, flushed with the first approaches of the dawn, diffused over every rock, and glen, and stream, and forest, and glacier, a wild, sparkling, mysterious, unearthly beauty, which electrified the very soul. I see I am repeating the same terms again and again; but language, with all its plastic power, is insufficient to render with fidelity the numerous exquisite emotions which at such times crowd upon the mind. I was certainly for a time literally "wrapt, inspired." Heaven appeared to touch earth, and Poetry sat enthroned upon the mountains. But such raptures cannot last. With the increase of light, much of the gigantic sublimity of the scene dwinded away, though enough remained to render the passage of the Simplon one of the most remarkable scenes in the world.

We walked on to Persal, where we took a second breakfast, among the delicacies of which was some of the most delicious honey I had ever tasted. We still continued to ascend for several hours. But I was now tired of walking, and got into the cabriolet of the diligence, where I could see the scene at my ease. My companions, who all seemed to have taken a great liking to me, brought me delicious Alpine raspberries and strawberries, with a curious little fruit called *embrock*, peculiar to those elevated regions. The leaves of the last-mentioned plant, reddened by the autumn, literally illuminated the whole face of the mountains in several places. At length we reached the top of the pass, and saw the streams turn their back upon Switzerland, and roll their sparkling waters, against the morning sun, towards Italy.

CHAPTER X.—MADAME CARLI.

At the village of the Simplon we stopped awhile to change horses, drink brandy and water, and smoke a cigar. The *conducteur*, a fellow of infinite appetite, likewise ate another meal, upon which it would be difficult to bestow a name. He had eaten two breakfasts already, and meant to lunch a little further on; so that it was a sort of third breakfast, or first luncheon. The name, however, mattered very little to him. Being a philosopher, he ate when he was hungry, and drank when he was thirsty, without troubling himself at all to know whether the world approved of his goings-on or not. I should most likely have followed his example, but that our second breakfast at Persal had blunted my appetite. While he was regaling himself on the good things to be obtained at so great an elevation above the level of the sea, I amused myself with exchanging tender *adieux* with Madame Carli.

Our flirtation had been unfortunate, for my French companions, preferring their own amusement to the solid interests of poor Monsieur Carli, had so worried and tormented him about the supposed danger he would run by getting me to take his wife as mine over the frontier, that his imagination became alarmed; so that he chose rather to be detained at Simplon, as a person suspected of cholera, than carry out the plan of entering Piedmont, which we had so sagaciously formed at Brigg.

Our stratagem, had it been discovered, might have caused me considerable embarrassment; but the risk of this I was willing to incur, to oblige him. When too late, he found that he might very well have taken Dogberry's phrase for his motto, "Write me down an ass." He now came to me with his wife to express his regret—called Monsieur Morn and the rest "*des impertinents*," and said that he felt quite ashamed at being made their dupe.

"Here, during a whole week," said he, "shall I do penance for having been silly enough to misconstrue your motives; but, Monsieur, we shall meet at Milan, where I will endeavor to prove to you that, though I have been for the moment a jealous fool, it was but for a moment. What else I would and ought to say, I leave Madame to express for me."

So saying, he shook me heartily by the hand, and walked off. Madame Carli, though one of the best women in the world, was still a bit of a coquette, and, in ball-rooms or on a journey, liked to make love *pour passer le temps*. It was agreeable, she said; and then it was so long since she had met any one like me—by exact computation of time, probably six weeks—I was so earnest, so sincere. I could do no other than bow, and press her hand—compliments and flattery are so delightful from a woman! I professed to have been immensely happy, and said I did not doubt that we should pass our time most pleasantly together at Milan. How many more fine things we might have uttered, I know not; but just then I saw the remorseless professor running among the trees, in search of us. There was not a moment to be lost. We might never see each other again; and could we part like two statues? No! We bent

our heads towards each other, and I fear I kissed Madame Carli. But if I did, the time, and place, and circumstances will, I trust, constitute my apology. We were, I know not how many thousand feet in the air, surrounded by snows and glaciers. Everything there was cold but the heart, and the kiss was decorous and fraternal, just as it ought to have been. We then shook hands, and promised faithfully to meet at Milan. But did we? No! From that time to this, Madame Carli has been, among the millions of Eve's daughters who tread the mazy surface of this planet in smiles, invisible to me. Her husband, though something of an Oriental in feeling, was at bottom a right good fellow; and I trust her life has been a happy one.

"Ah! I had lost you," exclaimed the professor. "But what was that little cloud of drapery which has just disappeared behind the foliage?"

"It was nothing," said I.

"Then, nothing let it be," answered he. "But come; there is a countryman of yours down here in front of the inn, who appears so grand, and at the same time so *triste*, you had better speak to him. After having taken his place in the diligence, he turned away proudly from every one, as if we were not worth looking at, and is now gazing at the Alps, as though they alone were worthy to be his companions. Pray come, and try whether pride has congealed him into an icicle or not."

"He does not speak French or Italian," I replied.

"How do you know?" inquired the professor.

I felt quite sure of it; and, coming out just at that moment upon the terrace in front of the inn, went forward, and politely addressed my countryman in French. He made me a profound bow, but said nothing. I then spoke in Italian, with the same result. Upon this, quite sure that my conjecture was well founded, I addressed him in English. "Ah! I am so delighted!" cried he; "but from your beard and mustache, I took you to be a foreigner, and thought I should be persecuted all the way to Milan. Where do you sit in the diligence? Can't I get a seat by you?"

"I have managed," I said, "to secure a place in the cabriolet, for the purpose of enjoying the scenery;" at which he looked blank, being booked for the interior. By a little manœuvring, however, we got one of the Frenchmen to cede to him his place, which was really a great sacrifice, as, from the hot and close inside of the diligence, nothing could be seen.

Nothing so speedily palls upon the appetite as magnificent scenery. At least I can speak for myself; I have at times derived extreme pleasure from the sight of the Alps, especially of those wild and savage portions of them which suggest ideas of death and utter desolation—where the water comes rolling and foaming down precipitous rocks, among dark pine forests, and tumbles into almost bottomless gulfs below, where you shudder as you lean over to catch the last sight of them. Enough of this sort of scenery had presented itself to us on our descent towards Italy; but if there be those who can gaze with undiminished pleasure on mountain after mountain—who never grow weary of the hills, and long earnestly for the sight of a plain—I may envy, but cannot understand them. Long before we reached Duomo d'Ossola I was sick of the Alps, and eagerly desired to behold the verdant flats of Lombardy, that I might be delivered from the eternal pine forests, cascades, and cataracts, and endless succession of peaked mountains, each exactly like the other. I have a powerful sympathy with the grand in nature, but have still greater love of variety. It was with inexpressible satisfaction, therefore, that I caught the first view of the Lago Maggiore, where beauty of the softest kind succeeds to savage grandeur. Ah! who that is happy would not live on the shores of that lake, which looks like a fragment of Fairyland thrown in by accident among the rough realities of this earth! I would not describe the scene if I could, it has so often been delineated. But, with my mind's eye, I see it now—a broad expanse of water, spreading among winding shores, which conceal its extent; terraced banks covered with verdure, and dotted thickly with white, glittering villas; isles of poetic beauty, floating, as it were, on the surface of the lake; and, far away towards the west, serene and quiet towns, sending up their peaceful domestic smoke against the evening sky. The golden light of sunset bathed everything in splendor; and my heart beat with a strange delight, to feel that I was at length in Italy.

CHAPTER XI.—ENTRANCE INTO ITALY.

What would not those who have felt much, give to be able to chronicle all their sensations? It may be truly said that what we learn from experience belongs to our outer life, while what we feel is treasured up in our heart of hearts. The obscurity of evening was over Italy as I approached it. She was like a beauty meeting her lover beneath her veil. Though not unconscious of the loveliness extending around on all sides, I longed for sunrise to reveal it to me. My pleasure was too great to be enjoyed in darkness; I therefore wished for day, that, by rendering the object of my admiration half visible to sight, as it were, I might deprive it of those mysterious additions bestowed by fancy, which rendered its enjoyment almost oppressive. Mohammed pronounced the approach to Damascus too delicious; and I found it impossible to sleep on the night before my arrival at Thebes. The soul at such moments feels a tumultuous joy, which stern reason, perhaps, will scarcely justify; but the sources of it are within you—you have been replenishing them from your childhood by the study of history, poetry, and romance. It is you who make the earth a paradise or a hell for yourself. I would not sleep on the night of my arrival in Italy—that is, I determined to resist it; but having been kept awake by superior excitement the whole of the night before, my resolution was only half kept. I found myself dozing and dreaming perpetually, as the heavy diligence, laden with sleeping men and women, went jolting drowsily

along the plains of Lombardy. Will the reader pardon me if I relate one of my dreams? I have said that I had left at home a host of children, among whom was a charming little girl, six months old. There is no explaining the mechanism of fancy; but, after travelling long and far through the unreal world, I arrived at length at the garden of Jolimont, where I saw my baby smiling in her mother's arms. I stooped forward to kiss her; she playfully retreated. A second and a third trial were made. Being seated on the box beside the driver, I nearly, in my dreaming eagerness, precipitated myself forward upon the horses, and awoke with an instinctive effort to recover my position. The domes and towers of Milan just at that moment rose before me, bathed in the ruddy light of the dawn; and the rich verdure of the plains on all sides was glittering with dew. On the right, far in the distance, were the towering Alps, rosy with the sun's first rays, and piercing the blue sky with a thousand luminous pinnacles. Not even Austrian despotism can deprive the Lombards of the enjoyment of such moments, though the pleasure must be dashed by the consciousness that, whatever may be their physical enjoyments, they still are slaves.

It forms no part of my design to describe cities, or churches, or palaces, or pictures. The guide-books do that. I went, of course, to the cathedral, and glanced over all its curiosities. But I find nothing about them in my memory, and therefore shall say nothing. I remember perfectly well that, on entering Lombardy, my passport was taken from me, and forwarded to Milan, where I was told it would be delivered to me on demand. There is, of course, no living in any Austrian city without a passport; so, the very first morning after my arrival, I had no sooner breakfasted than I sallied forth in search of the police-office, that I might obtain official permission to breathe the emperor's air. There are those among my countrymen who like well enough the present state of things, and fancy that Italy never was so happy as under the rule of the Teutonic barbarians. For myself, I sighed for the turbulent republics of the middle ages, and would rather have seen a capital in every village, and a frontier in every parish boundary, and men armed to the teeth defending them, than have witnessed the dead calm which, when I passed through it, was brooding over Lombardy. It was like the sleep of death.

As I was proceeding towards the police-office, I met, under the piazza opposite the cathedral, a lady, whose face immediately made me forget my errand. She was so fair and beautiful, I took her to be a daughter of the north, and could not resist the temptation to speak to her. So, stepping forward, and taking off my hat in the politest manner imaginable, I inquired, in English, the way to the police-office.

"Non capisco," was her reply.

I then apologized for addressing her in a foreign language, but said—"I have mistaken you for an Englishwoman, you are so extremely beautiful."

"And are the English women so extremely beautiful?" inquired she.

"You may judge," said I, "since they are like you."

"I suppose they flatter a great deal in England," observed she, with a smile, "and you have probably learned the art there."

"Nay, it is in your country that one learns to flatter; if, indeed, it be flattering to speak the truth."

"This is not my country," replied she. "I would it were!"

"Then you are a Frenchwoman?"

She shook her head.

"A Swiss?"

The same dumb sign of negation. My curiosity was now excited.

"I trust you will pardon me," said I, "but really I am curious to know what country has had the happiness to give birth to you."

"I am an Austrian," she replied.

"Is it possible?" was my involuntary exclamation.

"If you are surprised at that," said she, "you will be still more surprised when I add that my feelings are all Italian."

This little dialogue took place in front of a shop, out of which an officer soon came, flourishing a new whip, which he had just been purchasing. He looked at me with something like a scowl, and, saying a few words to her in German, from the tone of which I could not doubt she was his wife, walked off with her, though not before she had turned round and bowed to me twice.

I had, meanwhile, forgotten the police-office and the passport, which now, however, as the temptress was gone, speedily made their way back into my memory. When I reached the important premises, I was informed that, by some extraordinary accident, my passport was lost, or else had not been duly forwarded. In the mean time, however, I might remain at Milan, for visiting which I, of course, had particular motives. I admitted that I had motives, and that they were very particular, but declined explaining them till my passport should be found. It was quite immaterial. I was living under a paternal government, and would, doubtless, like to converse with one of my countrymen, who, as great good luck would have it, was then in the office. Though an Englishman does not travel to see Englishmen, I had no objection; and the wily agent of Prince Metternich was forthwith brought face to face with me. A man is never so bold or so politic as when he has nothing to fear or conceal; and the pains the worthy agent took to see further into the milestone than he who made it, amused me immensely. He was resolved to find out all about me, and I was resolved he should not; and so we went on for an hour, at least, thrusting, and parrying, and beating about the bush. Nothing more contemptible can be conceived than a government which experiences alarm at the passage of a humble foreigner through its dominions, who has no political mission, and who,

however crafty or Jesuitical he might be, could really, in ninety cases out of a hundred, effect nothing. However defective our own institutions may be, they really deliver both us and our ministers from suspicions so humiliating. A man in Great Britain may come and go, and laugh and talk, and declaim to his heart's content against anything and everything, without exciting the slightest alarm. Freedom is our safety-valve, and we use it unsparingly; but under Austrian rule, the clucking of a turkeycock would alarm the authorities. Metternich would have trembled in his palace, and the emperor would have felt insecure, if I had been suffered to pass through Lombardy without its having been ascertained who I was, how many wives and children I had left behind me, what was my object in travelling, what means of subsistence I possessed, and whether or not I meant, on my return, to parade my formidable beard and mustaches through the Lombardo-Venetian kingdom. Having cherished, all my life, a contempt for grandees who happen to have nothing but their position to recommend them, I should have felt the greatest possible pleasure, could I by any means have accomplished it, in making Metternich and his emperor sleepless for a month. Unluckily, I was too unimportant for that, though they had, certainly, the benefit of my best wishes.

CHAPTER XII.—CARLOTTA.

Through some letters of recommendation I had brought with me, I was invited to a musical *soirée*, where the company was chiefly made up of Germans and French, with a slight sprinkling of English people and Italians. One of the first persons I noticed on entering was my female friend of the piazza, who introduced to me an Italian lady and her daughter, who, she said, were about to set out in a few days, by Veterino, for Genoa. Few faces could exceed in interest or beauty that of the young Italian lady. Strange to say, she was very fair, and possessed a pearly clearness of complexion not always found in fair women. Her eyes were of that amethystine blue which is of all colors the most beautiful. They seemed like little fragments of the sky, and had all its infinite depth and serenity. It was impossible to look at them without a certain fluttering of the heart. I preserved silence a little longer, perhaps, than was becoming; but at length observed that, as they were travelling towards Genoa, it would afford me very great pleasure to be permitted to accompany them. The mother replied, that nothing would be easier, as they did not intend taking all the carriage, but merely places for themselves. Having learned their address, and that of the owner of the carriage, it was agreed that I should call on them, and make my arrangements, in the morning. I have a very foolish habit of being contented with one person at a time: and, finding Carlotta (the only name by which, in these pages, I wish to designate her) extremely agreeable, I forgot altogether the rest of the company; and, had I been permitted, should have spent the whole evening in conversing with her. Our dialogue, however, was soon interrupted by Carlotta's being requested to sing. I hate singing in general, especially when a knot of women commence wailing, like so many lost spirits, around a piano-forte; but when a woman has a sweet voice, and knows how to use it, I could listen to her forever. The pleasure of such moments is like few in this world, and comes back again and again upon the memory in after-years, renewing the delight of the moment, and investing it with all those delicate touches of melancholy which cling to whatever we have enjoyed. Carlotta, as she placed herself at the piano, threw back her massive dark brown ringlets, and raising slightly her large eyes, paused for a moment, as if to collect and summon up her powers. She then sang. To describe my sensations while her voice was pouring like nectar around me, would be impossible. The notes seemed to descend like drops of melody into an ocean of sound, which rolled and reverberated with infinite undulations over the soul. Had she not been beautiful, and possessed a seraph's voice, it would have signified little, as far as I was concerned. But when all that is lovely in countenance or expression, and all that is graceful in the female form, are added to a voice of infinite richness, sweetness, and power, it would require a stoicism much more perfect than mine to remain indifferent. The Austrian lady whom I had met in the morning, observing how completely I was absorbed by Carlotta's singing, roused me from my reverie by inquiring how long I had been in Italy.

"One day," I replied, as soon as I could collect my thoughts.

"Before you have been many days," said she, "you will be lost past recall. The women on this side of the Alps are sirens."

"And on the other too," I answered.

"Well," she inquired, "are you not very much obliged to me for providing you with companions so agreeable as you appear to think Carlotta and her mother?"

I professed myself to be infinitely indebted to her. We then entered into a long conversation on operas, music, the great singers we had both heard, and so on. She did not affect enthusiasm, but felt it, as I could easily perceive by the language she employed. I experienced no enthusiasm, and did not affect it; but confessed, rather than boasted, that certain singers and kinds of music had very great charms for me.

At the table d'hote of the hotel where I lodged, I met two officers of the Indian army, with whom, for various reasons, I fraternized at once. They gave me letters of introduction to friends at Genoa and Leghorn, and promised, if they ever met me at Alexandria, as they fully expected, to ascend the Nile in my company, at least as far as Thebes, where they would turn off towards the Desert and Cosseir. In company with these gentlemen, I strolled about the city, after having early secured my place in the carriage, and saw such curios-

ities as Milan has to show—at least with one exception, "The Last Supper," by Leonardo da Vinci. I put off visiting this from hour to hour, and day to day; why, I know not, since, of all inanimate things, it was what I most wished to see in Milan. Perhaps Carlotta's fascinations had something to do with it

CHAPTER XIII.—DEPARTURE FROM MILAN.

At length we left Milan, early in the morning, the rich green plains being lighted up by a golden autumnal sun. There were six persons in the carriage, an Italian gentleman, with his wife and daughter, Madame B——, Carlotta, and myself. We were accompanied by another carriage, larger than our own, filled inside and out with Swiss, who were proceeding to take service in the Neapolitan army. With these riffraffs of the Alps was a German, who figures in "Margaret Ravenscroft" under the name of Semler. We afterwards saw much of each other, but at starting had no further acquaintance than what one picks up at a table d'hote, for we had dined together ever since my arrival at Milan.

Madame B—— was a woman of about thirty-six, handsome, but hard-featured, who, having neglected, apparently, to make the most of her beauty when young, was now determined to make up for it as fast as possible. She flirted indifferently with everybody; but got out of temper, and looked as fierce as a basilisk the moment one spoke to her daughter, whose person she seemed to look upon as nothing but a cage for her voice. At first she placed herself in the middle, between me and Carlotta, with whom, therefore, I had to speak, when I spoke to her at all, across her mamma, which was very awkward. But as the day grew hotter, Madame B——'s regard for her own comfort overcame all other considerations, and she asked me as a favor to change places with her, as she wished to sit near the window for the sake of the air. I would have consented to sit in an oven, to oblige her; and, indeed, for some hours during the middle of the day, I might as well have baked myself with Monsieur Cabot, as have sat where I did, scorched internally by the fire of Carlotta's eyes, and externally melted by the sun.

The Italian patriarch, who sat opposite, was far more comfortable, because he had no flesh to lose, being little better than a walking anatomy. The sun and atmosphere had done their worst upon him. Brown as a mummy, with large, heavy, dark eyes, high cheek-bones, and a mouth of enormous capacity, he had very much the air of a scarecrow.

His wife had been handsome in her time; and the daughter was so still, though she had reached, in single blessedness, the alarming age of two-and-twenty, after which a woman regards her chances of felicity gone in Italy. As papa formed my vis-a-vis, I could not, ugly as he was, avoid entering occasionally into conversation with him. He illustrated strikingly the common adage, that one should never trust to appearances—since he could talk like an angel, and had a mind so stored with knowledge, and was of a temper so finely balanced, that, before we had travelled far, I could hardly tell whether he or Carlotta was the more fascinating person of the two.

What I had first mistaken for heaviness in his eyes, was an expression of extreme serenity. If he had ever known the storms of the passions, Time, with his vast wings, had now lifted him far above them, and placed him on that intellectual eminence where, as Lucretius expresses it, "a man may look down upon humanity, toiling, wandering, and fretting below." Strange to say, he had been in the army, where he had preserved, unabated, through many a campaign, his faith in Providence, and his love of knowledge. Though he had married early in life, he had had but one child, whom he seemed to regard with extreme tenderness and affection. His wife was what the French call *une femme nulle;* that is, a woman of no character at all.

I never could pretend to understand the art of flirtation, and; on the present occasion, most satisfactorily demonstrated my ignorance. Instead of taking advantage of my position to ingratiate myself with Carlotta, as any man of the world would have done, I entered into a discussion with Signor Castrucci on the character and writings of Machiavelli. At first, considering in what country we were travelling, he sedulously avoided politics; but, as conversation begot mutual confidence, we spoke out boldly on the affairs of Italy, both past and present. On my referring to Machiavelli, he smiled, and said, "I will tell you an anecdote, from which you may perceive how early in life I became attached to that great author. I received my education under the Jesuits, who, as you know, watch over their pupils with the utmost strictness, allowing them to read no books but such as they themselves put into their hands. I had an uncle in the town, close to which our college was situated; and I was sometimes permitted to visit him. There, one day, on a window-seat, I found a volume of Machiavelli's works, in which I immediately became interested. My uncle gave me the whole set, but cautioned me against carrying it to the college, since he assured me my preceptors would certainly take it away. 'I'll tell you,' said he, 'what you shall do—you must have it bound like the mass-book, and take it with you occasionally to church. It will then be mistaken for a help to devotion; and while they are engaged in their unintelligible rhapsodies, or useless ceremonies, you can improve your mind.'

"Of course, I carefully followed this advice, and read the works of the greatest of Italian writers over and over, till I became familiar with them all. One day, however, as one of the holy fathers was preaching on the Chinese mission, I happened to open my favorite volume at the commencement of the marriage of Belfregor, the caustic wit and dry humor of which pleased me

so much that I forgot where I was, and smiled again and again with delight.

"An honest Jesuit, who observed my merriment, thought it could hardly be excited by a book of devotion, and, approaching me stealthily, like a cat, looked over my shoulder, and discovered the horrid truth. Then, stretching forth his long, bony hand, he seized upon the volume, as an eagle pounces upon a hare, and, thrusting it into his bosom, cast on me a menacing look, and returned to his place in the choir. Up to that moment I had been intended for the ecclesiastical profession; but, while my heart was boiling with indignation, I made up my mind, and, walking out of the church, went straight to my uncle's: and never entered the Jesuits' college again.

"Love, I acknowledge, had something to do with my resolution. My uncle had a very charming daughter," said he, smiling, and turning towards his wife, who returned the smile; "and proposing for her hand, my offer was accepted, though the marriage was postponed for some time. Meanwhile, I entered the army, where I have risen to the rank of General. In due time I married; and you perceive," added he, turning to his wife, and then to his daughter, "the whole of my family."

"You are more obliged to Machiavelli," I observed, "than most persons. Through his aid you have escaped celibacy, and risen to honor and distinction."

Signor Castrucci bowed.

"And now," I inquired, looking back from this distance of time, do you think that the notions you entertained of the Florentine statesman in your youth were correct?"

"Machiavelli," he replied, "was essentially a revolutionary writer; he despised all the established governments of his time, and labored earnestly to subvert them by propagating those principles of expediency which render men indifferent respecting the means they employ to accomplish their ends; he esteemed liberty the greatest good that men can enjoy, and thought them justified in wading to it through seas of blood. The princes and rulers of his time set no value on human life, which they sacrificed in all ways to gratify their most despicable caprices. He therefore counselled the people to follow their example, and labored all his life to undermine the sentiment of respect for greatness which is one of the most fatal weaknesses incident to human nature. To dissipate this feeling, he dwells on the crimes and follies of kings and princes, and seeks to overwhelm them beneath a load of contempt. No man can rise from the perusal of Machiavelli with the same sentiment of loyalty with which he commenced it. His attack is conducted in the most insidious manner, for he often praises what he wishes you to hate; but is careful that his praise should be calculated to provoke your detestation."

"Strange," interposed Carlotta, "that of so great a man's life so little, comparatively, should be known."

"Signora," replied Castrucci, "the lives of the greatest men the world has ever produced have been obscure, like his. We see the effects their genius produced, but are unable to measure the productive force; just as, in our own country, we behold a mountain thrown up into the air by volcanic agency, but never perceive the power at work."

"I have read the history of Florence," observed Carlotta, "and what remains of the letters —but should like to know much more of the man who wrote them."

We now entered into a literary conversation, in which Carlotta's mother, a woman of considerable knowledge, joined occasionally. To my great surprise, I found that the daughter had read extensively, was acquainted with Dante, Petrarch, Ariosto, Tasso, and Metastasio—the last more especially—and could dissertate upon poetry and music like a professor. With all this, her manner was the most modest, gentle, and unassuming that could be conceived. She had, literally, no vanity, or concealed it with so exquisite an art that she might as well have been without it.

CHAPTER XIV.—THE CHURCH OF CERTOSA.

Late in the afternoon we turned off from the high road, to visit the conventual church of Certosa, the interior of which we found to be one blaze of rich ornaments. Few things in a woman are so beautiful as the feeling of devotion. Carlotta, I found, was overflowing with it. As we approached the church, through an avenue of noble trees, her manner, always modest and subdued, became much more strikingly so. Her voice sank to a lower key; her animal spirits were hushed; and her large blue eyes appeared to grow moist with delight. "How pleasant it is," said she to me, in a low, sweet voice, "to enter the house of God! See, from the walls yonder, how the Holy Virgin smiles upon us! Ah! what rich tints tremble and glitter on the pavement! Must not heaven be something like this?"

And whatever we, here in the North, may say, there is certainly something in the architecture, ornaments, and brilliant light of southern churches that kindles irresistibly the spirit of joy. The gloomy aisles, aspiring arches, fretted roofs, long casements, and profusion of shadow, in a Gothic edifice, may produce a more powerful effect on our imagination, but it is not enlivening. On the contrary, it is akin to sorrow; and as our climate itself is depressing, we experience, in their fullest force, all those melancholy influences which tend to impart a sombre aspect to religion. We surround our sacred buildings with groves of yew-trees, and, in the country, permit gray and yellow lichens to spread themselves over the walls—green damps and immense patches disfigure the interior, and irresistibly lead us to associate humidity and darkness with everything beyond the

grave. In Italy the reverse is the case. Marble floors, richly painted windows, magnificent altars, pictures, statues, columns, gilding, and whatever is bright and beautiful—the whole penetrated and almost rendered transparent by light—surround you on all sides, and produce a peculiar effect on your fancy. You do not need to mount in search of the skies—a little compartment of heaven seems to have descended for your use, and a holy atmosphere murmurs and breathes around you.

Familiarity does not always breed contempt. Madame B. put more confidence in me as our acquaintance proceeded, allowed her daughter to take my arm, while she took the other, and conversed with me freely as we walked through the church. They forgot I was a heretic, and consequently gave full vent to those rapturous feelings which devout Catholics experience from time to time. Religion, in some persons, is an instinct—finest in the finest organizations. The soul, in such cases, seems to be an instrument so exquisite, and of so vast a compass, that it cannot yield forth all its music when played upon by anything but heaven. Carlotta's soul was one of these. Her exquisite sensibility, her fervid imagination, her impassioned heart, rendered her susceptible to the most delicate influences; so that religion easily became a want of her nature.

She invited me to kneel with her while she said her prayers. At that instant, from a gallery far above, we heard a burst of music, and numerous voices of women, chanting the "Agnus Dei." And oh, the effect of music at such a moment! Angelic voices appeared to be hymning their Creator in the courts above. The sounds descended upon us like showers of delight; and the Lamb of God, and the Virgin, floated softly through the incensed atmosphere. Carlotta placed one of her hands on mine; the other was pressed on her bosom. We did not speak. It was a moment of more than earthly pleasure; and when the hymn had been chanted we rose from our knees, walked forth from the church, and returned to the carriage in perfect silence. But, through that silence, what celestial melodies appeared to roll! The soul was full of music, and therefore the ear needed none. Such was my brief visit to the church of Certosa.

We now pressed on with unusual speed towards Pavia, where we arrived in time for a late dinner. Here we lost sight, suddenly, of Signor Castrucci and his family. We took no leave of each other. He disappeared in the inn yard, hurried off, perhaps, by some friends, who would not allow him time for the ordinary politenesses of travelling; or he may have lived at Pavia, and forgotten us in his eagerness to visit home. Carlotta and her mother retired to dine in a private room; and I was left with a rabble of Swiss, whose company would have been altogether insufferable but for the presence of my friend Semler, whose kindness and generosity of character I have endeavored to do justice to elsewhere. A good dinner is apt to soften the worst of tempers; it did so in the case of my Swiss companions, whose minds, however, like certain ancient Chinese vases, only showed more clearly the monsters painted on them as they were the more completely filled with wine. I am, upon the whole, extremely tolerant; but the conversation of Swiss and Germans after dinner was too much for my equanimity. As they drank, they became communicative, and were so overpowering in their confidence, that I soon proposed to the Hanoverian to take a walk with me in the city. However, we were not destined so to escape, for our jovial friends no sooner discovered our design than they abandoned their cups to accompany us. I sent them for the moment to the warmest of all latitudes—that is to say, internally; common decency compelled me to appear flattered by what they really intended as a compliment. So forth we went, with abundance of cursing and swearing, and considerably worse occasionally, to see the churches of Pavia. In one of these Semler and I managed to lose ourselves, or rather our companions, by slipping softly out at a side door, and plunging down the first dusky lane we could see, which fortunately led us out upon the banks of the Ticino, near the old-fashioned, picturesque, covered bridge. It may argue little taste in me to admire so strange and grotesque a structure, but I plead guilty, nevertheless, and acknowledge that I experienced considerable pleasure in walking through that long wooden gallery, strongly roofed over, and affording, through spacious openings on either side, magnificent views of the broad waters of the Ticino, fringed with shrubs and low trees, then beginning to be painted with the rich hues of autumn.

Every person, perhaps, has a favorite season of the year—some preferring the summer, others the spring, others winter, and others, like myself, the golden autumn. The zest of our pleasures is heightened by an infusion of melancholy. Few things are more melancholy than music—none so melancholy as love, which is, in fact, nothing but the consciousness of a desire never to be wholly gratified here below. Love is the yearning of the soul after the beautiful, which is but another expression for the infinite. Doubtless the fresh green of spring, when the trees stand in genteel half-dress before the modest sun, is highly refreshing to the mind as well as to the eye. But autumn comes to us, decked in a thousand colors, painted, partly, by the hand of decay. It is beauty on the threshold of the tomb, rendered more beautiful and fascinating by the air breathing upon it from beyond. We fancy we never discovered all its loveliness till then. Death itself is marvellously beautiful, in its eternal silence and composure; it hints the mystery it dares not speak; it seems to have closed its eyes, only that it may indulge in delicious dreams forever. All realities seem nothing compared with the ideal creation which throngs upon the soul in death. And autumn is the threshold of death—mature, soft, balmy, like the thoughts of old age, illumined by the light of heaven. For this reason I love the autumn, and

appear to think and feel in it with greater ease and delight. It is like the diminutive mummy at an Egyptian feast, bidding us enjoy ourselves rapidly, before we depart hence, and are no more seen. Thoughts like these crowded on my mind as I gazed on the rolling waters of the Ticino, rendered bright by the setting sun, but a thousand times more bright by those glowing classical associations which clothe every inanimate object in Italy, and impart to it the accumulated beauty of two thousand years. The breath of the old Roman republic seemed to breathe softly around us, rebuking Teutonic despotism, and whispering that a day of deliverance is at hand.

CHAPTER XV.—THE CARBONARO.

Next morning we were stirring with the dawn, and had already made some way when the sun rose. There is nothing so fleeting as those phenomena of nature which we denominate sunrise and sunset; and yet they sometimes paint themselves so vividly on our memories that the picture never wholly fades away, save with the crumbling of the canvas. The beauty of that morning I still remember distinctly. The sun rose out of an ocean of ruddy and saffron vapor, and shed over all the woods and copses, now moist and glittering with dew, a splendor and a gorgeousness of coloring which no art can imitate. The mystery of creation seems to be renewed every morning in the south, for, as the world emerges from darkness, it appears to put on the robes of a virgin, and to stand smiling in eternal innocence in the presence of its Creator. The deep blue of the overhanging sky completes the mighty picture; and our imagination ascends its luminous arch to the very footstool of the throne of God.

As I and Semler were enjoying, in silence, the pleasure of the morning, we heard a rustling among the bushes at the side of the road, and soon saw a man spring out, with a large bundle in his hand. He came bolt up to the carriage, requested the driver to stop a moment, and then boldly asked us for a place. What he was he would explain, he said, as we rode along. I was struck with his physiognomy, which was that of boundless self-possession and audacious impudence. He had fiery red hair, a highly-flushed complexion, and light blue eyes. Still, his manners were gentlemanly, and he soon proved himself to be in possession of large and varied stores of knowledge. He said he had been compromised for some political offences at Milan, and was now endeavoring to effect his escape from the Austrian dominions without a passport. We bade him get up, which he did, and began talking at once. He was, of course, a Carbonaro, and proved his fitness to be a member of the secret society by pouring forth a torrent of words with little or no meaning in them. He must have been of German origin. There was nothing Italian in his look, or bearing, or tone of thought. When we came to the bridge across the Po, he purposed to leave his bundle on the top of the carriage, and, with his little cane in his hand, to stroll leisurely across the bridge, as if he had been merely out for a walk, and would return into the town. I watched the operation with considerable interest. He alighted as we approached the river, and, preceding the carriage a little, moved slowly towards the *corps des gardes* at the end of the bridge. There, instead of appearing in a hurry to pass, he leaned upon the parapet, and chatted with the German soldiers, whom his loose wit immediately provoked to laughter. He then wished them a good morning, and proceeding infinitely at his ease, in a few minutes found himself in Piedmont. As we were detained to have our passports examined, the jolly exile was several miles on his way before we overtook him, when he bounded up to his place with a light spring and a laugh, saying he had felt Prince Metternich's fingers at the nape of his neck till he was fairly over the Po. "But now a fig for the old rascal," said he; "his downfall must be approaching; and my most earnest wish is that I may assist in producing it." He was rather young for a conspirator, not, certainly, above five-and-twenty, perhaps much less. But, like Monsieur Flocon, he seemed to have lived nearly all his life in secret societies, and some portion of it, perhaps, in prison. I asked him what the members of the secret societies chiefly aimed at. He replied, "There are two sections, one of which dreams of a kingdom of Upper Italy, while the other thinks of nothing but the establishment of a republic. I belong to the latter class, and have sworn to plot and conspire against kings while I have breath. So here 's to you, Prince Metternich!" said he, turning round and spitting at Lombardy.

I had exchanged the interior, notwithstanding that it contained Carlotta, for the outside and the fresh air; and now our Milanese exile came luckily to dissipate the German phlegm of Semler, and put to flight the bashfulness of a young Dalmatian who had joined our party at Pavia. By these two I was infinitely amused. The Dalmatian presented the most complete contrast to the Milanese. He was tall, muscular, of a dark olive complexion, with hair and eyes as black as jet. His habits had evidently been studious; although he could not have been more than twenty years of age, he spoke and reasoned like a man of thirty. In politics he was as red as the Milanese; though, at his own home, which was at Trieste, he expected, he said, to find no sympathy, but, on the contrary, the most determined opposition and dislike. "My father," he observed, "is a monarchist of the old school, full of the prejudices of bigotry, but otherwise a good man. He is advancing by a double road towards fortune, being engaged in commerce and the cultivation of the soil. We have a pretty little property near the city, where there is a vineyard descending in terraces towards the stream; and there, at the foot of a bitter-almond tree, I have hundreds of times sat reading Machiavelli and Fra Paolo, and meditating the revolutionizing of Italy."

Semler either took no interest in politics, or

held opinions different from ours, for he remained silent during our discussion, and only emerged from his reverie when we spoke of poetry or the fine arts. On these he was eloquent, especially when he could obtain exclusive possession of my ear, and dilate on the praise of Shakspeare. Of late the Germans have cherished the odd opinion that we, the countrymen of Shakspeare, have learned through them properly to appreciate him. It may very well be doubted, however, whether any foreigner, German or not, can be said to understand our great poet, whose very language is often *caviare* to the bulk, even here in England. To build up dreamy theories about his meaning is not always to understand him; and this is what German critics have generally done. Semler was modest enough to admit that he admired, without always comprehending, Shakspeare; and if he had not understood him at all, he might still, according to his own theory, have admired him, because he was not one of those who think that what Locke calls clear and distinct ideas are necessary to the production of intellectual delight. On the contrary, he believed that mistiness and obscurity are not only a source of the sublime, but powerful ingredients of pleasure, since, according to them, it is far more agreeable to move in partial or total darkness than in the light.

I certainly experience no small degree of enjoyment from travelling in an express train through a long dark tunnel, which suggests to one the idea of rushing wildly through infinite space; but I certainly should not like to be condemned to travel all my life in such Cimmerian gloom. A flash of darkness does very well now and then, but if Shakspeare's ideas were always surrounded by a Stygian atmosphere, in all likelihood his admirers would not be quite so numerous as they are.

The country between Pavia and Nove is a dead flat, though I could perceive everywhere spots which made pleasant pictures to the eye—copses, thickets, glades, vistas, lofty trees, and sheets of water, all glowing with the warmth of an autumnal sun. Towards evening we arrived at Nove, where I saw a curious illustration of the way in which a man may sometimes get introduced into good Italian society. Of course there is a very great difference between the people you meet with in such cities, and those who inhabit the several capitals; but I dare say the man who travels with an open heart and frank manners through Italy, will often find openness and frankness in return. At any rate, I must speak of the Italians according to my experience; and if they behaved better to me than to others, it is but fair that I should acknowledge it. We often make our own receptions, and receive what we give. The Italians especially like to have faith put in them; and so far as I have seen, they well deserve to be trusted —I mean, of course, as a general rule.

THE DEATH OF THE FLOWERS.

BY W. C. BRYANT.

The melancholy days are come, the saddest of the year,
Of wailing winds, and naked woods, and meadows brown and sere;
Heaped in the hollows of the grove, the withered leaves lie dead,
They rustle to the eddying gust, and to the rabbit's tread.
The robin and the wren are flown, and from the shrubs the jay,
And from the wood-top calls the crow through all the gloomy day.

Where are the flowers, the fair young flowers, that lately sprung and stood
In brighter lights and softer airs, a beauteous neighborhood?
Alas! they all are in their graves, the gentle race of flowers
Are lying in their lowly beds, with the fair and good of ours.
The rain is falling where they lie, but the cold November rain
Calls not from out the gloomy earth the lovely ones again.

The wild flower and the violet, they perished long ago,
And the briar-rose and orchis died amid the summer's glow;
But on the hill the golden-rod, and the aster in the wood,
And the yellow sunflower by the brook in autumn beauty stood,
Till fell the frost from the clear cold heaven, as falls the plague on men;
And the brightness of their smiles was gone, from upland, glade and glen.

And now, when come the calm mild days, as still such days will come,
To call the squirrel and the bee from out their wintry home;
When sound of dropping nuts is heard, though all the woods are still,
And twinkle in the smoky light the waters of the rill,
The south wind searches for the flowers, whose fragrance late he bore,
And sighs to find them in the wood and by the stream no more.

And then I think of one, who in her youthful beauty died,
The fair meek blossom that grew up and faded by my side;
In the cold moist earth we laid her, when the forest cast the leaf,
And wept that one so lovely should have a life so brief;
Yet not unmeet it was that one, like that young friend of ours,
So gentle and so beautiful, should perish with the flowers.

From the Examiner, of 20th Oct.

FRANCE AND ITALY.

The French, who put so much interest into their theatres, are not successful with their political drama. It is wearisome and disgusting to contemplate. And yet it is full of stirring events, startling changes, strange surprises, great fortunes involved, the fates of men and empires hanging on a thread. Yet, with all these materials for tragedy, it turns out to be a most vulgar and common-place drama after all. And the reason we believe to be, that there is no *character* in the personages. Amid the numbers brought upon the public scene, of all ages, ranks, color, and profession, not one stands forth as truly great, or eminent, or magnanimous in any way; few as even honest. The truth is, we suppose, that a certain degree of simplicity is necessary to greatness; and that there is no simplicity in the men who have served half-a-dozen dynasties, and set up scores of political aims in the course of their tortuous career.

In likening French political life to the stage, let us not forget the quick metamorphose of character and costume indulged in by the actors. For example, when the National Assembly last broke up, we left the magnates of the conservative party plotting, or pretending to plot, how they should extend Louis Napoleon's three years' lease of power to ten years. Were they serious and sincere at the time? It is to be doubted. Certain it is, that not only has the idea been abandoned, but another idea now peeps out. The conservative party no longer looks to any consolidation of power under Louis Napoleon, but simply to making the present president a stepping-stone to the restoration of a legitimate monarchy. This is the plain English of the *situation*.

M. Thiers has divulged it, by holding a language on the Roman question, such as no politician could hold that did not look to a legitimist prince as his future master, and to the priesthood as his main support. The reason is admitted on all hands, is scarcely denied by M. Thiers himself; and it has excited in the breast of Louis Napoleon a burst of honest indignation, such as that prince is capable of feeling and expressing, at least for twenty-four hours. His resolution and sagacity seldom extend beyond that period.

Whilst we write, the breach is wide in Paris between the president and those councillors whom he has hitherto implicitly trusted. Louis Napoleon, however, though a generous steed, has still a curb in his mouth; that curb being the conservative majority in the Assembly, to which he has lent himself altogether, and of which he is the instrument and slave. The aim of this class is to restore their own power, and whatever prince or *régime* can best serve their purpose. All they clearly see is, that the republic is, of all *régimes*, that which is most unfavorable to the establishment and permanence of their monopoly.

Foreign policy in France is unfortunately a mere corollary to the internal struggles going forward. The French are somewhat like sailors who have escaped from a foundering vessel, and find themselves at sea in an open raft, without helm or sail, exposed to the tempest and to the mercy of the tide. All they think of is, to reach dry land, the nearest land, and keep alive till then. They are in that state of doubt and danger where intense selfishness is the only feeling and motive. Talk to such a people of philanthropy, of liberty, of humanity, of national pride, or of the sentiments they most prized before their wreck, and they not only do not assent, but they do not comprehend the language. They are embruted by selfishness and fear.

It is hopeless and melancholy to see the fate of Italy, for example, entrusted to such hands. That fate the French have completely in their power. With an army of from 20,000 to 30,000 men in Rome, and the whole of the population ready to follow a liberal call, the French have but to say the word, and it is law. They have but to insist on constitutional government, nay, to install it and convoke it. Naples could not resist. Tuscany could not hold out. A popular government, established in any one corner of Italy, would, by its light, its happiness, its preëminence, alone command and force all others to ruin themselves by imitation, or to perish by the contrast. The French at Rome have in their power to say either, *Let there be day*, or *Let there be night*. Such is the alternative.

It is upon this alternative that the French Assembly is about to debate and the French government to decide. M. Thiers has drawn up a report in the name of the committee, and this report may be construed and concentrated in the few words of *Let there be Night* over Rome and Italy—the old night of papal despotism. The French republicans, to their honor, held up their hands and voices for Day. Louis Napoleon timidly, but generously, proposes a middle term. He wants at least twilight, the dawn if not the fulness of liberal institutions. The request is modest. But the Pope will not have it. Austria is indignant at it. And the French legitimists are for the supremacy of the priesthood, that great party on which they count to darken the mind of Europe down to the worship of their idols. M. Thiers makes himself the mouth-piece of the high priests; and Louis Napoleon has not the courage to venture more than a temporary pretext.

Thus the doom of Italy is to be sealed, as that of Hungary has been, and the same withering and vindictive spirit hovers over both. The police and the executioner are let loose to select their victims from the population; and all the liberal, the educated, the intelligent, the high-minded, are marked out for their prey. The prisons are gorged, and the few that escape to starve in exile are almost as much to be commiserated. Of this sad state of things France is mainly guilty. Her example it was, ay, and her exhortations, that excited the Italians to rise; and now it is her cruelty, apathy, and Machiavelism, that crush, decimate, and proscribe them. So has France served Spain, so is she treating Italy, and so is she sinking herself

into the depth of sacerdotal and lawless tyranny. It is but just that a country which has made it her boast to crush the liberties and mar the fortunes of her best allies and most attached neighbors, should be ruthlessly and degradingly cheated of her own.

From the Examiner.

HUNGARY IN OCTOBER, 1849.

As one that should behold, driven up and down
The skiey fields, some weaker bird hold fight
With eagles twain—so, land of old renown,
In dreadful silence Europe saw the light
Of battle hang above thy plains, and crown
Thy hills like a red meteor; till thy right
Yielding to power, swift thoughts and words again
Leap from the unbarred caverns of the brain.

From the Tartarian limits of the world
The northern darkness is rolled over thee,
Strangling thy morn, whose feeble star is hurled
Beneath the founts of Truth's retiring sea:
The Imperial dragons round thy sons are curled,
And the air saddens with their dismal glee:—
From tongue to tongue gabbles the brutish hiss,
Echoed afar from kingly palaces.

Yet, Hungary, thy freedom is not dead;
It does but sleep, and soon itself will rear:
Liberty, girt with stars about its head,
Walks in the light of God's unwaning year
Secure and calm; while despots, victory-fed,
Still tremble on the brink of some vague fear.
Triumphant kings grow pale, though millions greet
Their thrones! but Truth is glorious in defeat.

Storm comes, and noon-day darkness; yet, unshaken,
The blue and quiet heavens sleep behind:
Bleak winter comes; yet dreams of spring awaken
Beneath the murmurings of a warmer wind:
Death comes; but a new birth, like fire unslaken,
Kills with its dawn the night of humankind.
Evil is transient;—wrong, and force, and fraud,
By the great future still are overawed.

Thrones, Kingdoms, Empires, Dominations, fade:
They are as sand before the blast of Time,
Which, in quick scorn of what itself has made,
Scatters to voidness their frail shapes; they climb
Through their brief day—then huddle in blank shade;
Yet earth remains as in its freshest prime:
Good things, and pure, and simple, keep their bloom
Through the long years; all else is its own tomb.

Assyria, Babylonia, Persia, Greece,
Rome, and Arabia, held in turn men's fears—
Black masses in the golden light of Peace,
Casting wide shadows; but the fate-ful spheres
Wheeled round, and they were gone. Far longer lease
Has Truth, which, fed with dew of human tears,
Makes music with the winds and tempests rude,
Turning to sweetness their ungentle mood.

Therefore, high-hearted sorrowing one, look forth;
Look forth upon thy heritage awhile!
Two comforters, at least, hast thou on earth:—
The eastern Moon of Mahomet doth smile
On thy brave sons, and on thy suffering worth;
And all the cities of our western isle
Answer the voice of thy great agony
In words of fiery hope that shall not die.

Thou blood which dost pollute with hideous dew
The fields, be fruitful in great deeds! Be quick
O'er all the land, ye martyred hosts that strew
The valleys and the mountains, making sick
The general air with death, and Heaven's clear blue
A night of poisonous vapors foul and thick!
Be loud within the soul's intensest life,
Thou silence dwelling where has been fierce strife.

A deadly sleep is on the nations—Might
Rears its crowned head triumphant; but the flame
Of thy uprising, Hungary, shall make bright
The mourning earth with new-born life and fame,
As the stars fill with ever-flowing light
Their pure, cold, crystal heavens; and thy name
Shall hang above our era's dismal story
Like dawn on some out-looking eastern promontory.

EDMUND OLLIER.

From the Spectator, 20th Oct.

AUSTRIA, throwing off the mask, stands confessed in her old tyrannous cruelty, her old inexorable meanness. Count Louis Batthyani has been made to suffer a penal death at Pesth: and at Arad several military leaders have been slaughtered, for the most part by the rope. The charge was high treason. All were condemned to death by hanging, and the sentence was only commuted to death by fire-arms in the case of a favored few.

Count Louis Batthyani differed from some other Hungarian leaders in his strict adherence to the old constitution; by the constitution he stood against imperial encroachment; by it he stood against republican encroachment. He had taken no lead in the war; he was first seized while endeavoring to negotiate a reconciliation; he had been tried by a military commission, and acquitted; he sought no refuge in flight, was again seized by order of Haynau, and condemned to be hanged. He had challenged a trial according to the constitution of his country; he now attempted to avoid the illegal penalty, by suicide; but failing, he was led out to perish by military death.

There can be no doubt that this act violates the letter of the law, as it violates all civilized usage, and all dictates of humanity and sound policy. Count Louis Batthyani was not, strictly speaking, a prisoner of war; even if he had been, he might have pleaded a previous acquittal for his conduct during the war; but the charge against him, that of having infringed the Pragmatic Sanction by exceeding his duty as a minister, was manifestly not one for a military tribunal. The conduct of the Austrian government, therefore, is anarchical; it violates constitutional law and natural justice, and ought to rouse the nations in defence of order and justice. Austria rests on the combination of crowned heads and armies to enforce her will by such instruments as Haynau; her conduct is of a kind to strike despair into the timid, to rouse a fixed hatred in the bold. The Hungarians are not likely to forget it. *A fortiori*, it shows what would have been done with Kossuth, had he been surrendered;

it justifies Bem in taking refuge from Austro-Russian Christianity, as Amurath Pacha, in the more generous good faith of Islam.

From the Spectator, 20th Oct.

THE SPIRIT OF EVIL.

Mischief gains the ascendant in the central continent of the civilized world, wearing the crown and wielding the imperial sceptre. The Revolution of 1848 had its ugly traits; but, for all their errors, in their brief possession of power the peoples were generous. At Paris, all proscribed members of royalty were suffered to escape without injury to a hair of their heads; at Berlin, in the very tempest and whirlwind of the revolt, the king went abroad unharmed—and believed!—the "beloved Berliners" thought that in that hour he was surely in earnest. In Milan, the horrors of Spielberg, and the intolerable insolent tyrannies of local officers, were remembered only as provocatives to a generous revenge that struck not a single blow except in the fair fighting of the open streets. While Manin governed Venice, she had regained the noble sentiments of her prime; while Mazzini held Rome, the Eternal City was again governed by a magnanimous spirit that restored a life of glory to the mouldering bones of her greatness. Loud has been the execration for the murder of Latour—the assassination of a military chief who wielded the sword of a prevaricating and treacherous government; of Lamberg, bearer of messages to paralyze the emancipated nationality of Hungary. Those were crimes, and the most has been made of them; but they were not the acts of revolutionary *governments*—they were the crimes of the mob.

They have been eclipsed by the deeds of legitimate authority. It is with the return of her spiritual and temporal prince that meanness, servility, and cowardly oppression return to Rome; it is victorious Russia who is dictating an unchristian and cowardly breach of hospitality to the Turk; it is the imperial government of Austria which is setting the example of blood to the rebels of Hungary; it is the renewal of "order" in France which opens the way for a cruel and jesuitical treachery. Prussia and Austria are negotiating the partition of Germany among them—and then, Heaven help patriots or peoples!

It is not alone the cruelty of the ascendant powers which is to be deplored, but the lamentable moral and material effects that must follow. A bad spirit rules, and its influence is mischief. Austria is teaching the Hungarians, and all nations attempting to change the form or policy of their institutions, that victorious governments give no quarter to chivalrous foes, and that the only safety for nations that rebel is war to extermination. Hungary would now be safer if the rebels of Austria and Bohemia had brought the whole royal family and its adherents to the block—that is the lesson which Austria has recorded in letters of blood. Batthyani attempted to reconcile new imperial claims and old national rights: Batthyani is condemned to ignominious death. An imperial government is one that upholds its authority by the flogging of boys and *women;* revolutionary leaders disdain brutal and degrading weapons, but the imperial statesmen and decorated cavaliers of Austria wield the scourge and the rope, and war upon the weak. The scene at Ruskby, where Madame de Maderspach was scourged by order of an Austrian officer, was not only brutal in itself, but of necessity it rouses throughout Hungary—throughout Europe—a spirit of vehement revenge that longs to slake its thirst in the blood of the oppressor. The last act of leniency, if it is truly reported, only casts a slur on these ferocities; to the fugitives at Widden the same Haynau has granted an amnesty. Thus Kossuth, protected by the Crescent sword, enjoys the imperial mercy; Goergey, who negotiated at the head of an army, is freely pardoned; Batthyani, who confided in law and chivalrous faith, is murdered by the dispenser of imperial favor—a favor which spares the strong and wars upon the vanquished. Austria is fostering the bad passions of the dark ages. Nay, the manly Rudolph, who founded the house of Hapsburg, would blush for the recreant son who gives the power and dignity of that house in keeping to the butcher Haynau.

So in France, the literary adventurer Thiers, not having much hope of the republic as a profitable investment of his talents, is speculating for the fall, and warning future revolutionists not to trust those who have enjoyed the favor of princes. They are the crowned and accomplished vindicators of "order" who are teaching the world bad faith, cruelty, and degrading cowardice.

And England? Alas! she looks on and—prevaricates. She utters sublime sentiments, piquantly composed in essays by Henry John Viscount Palmerston—and suffers the wrong to go on. Does she not raise a finger—does she not vindicate the independence of Turkey? No, that would be "uncourteous" to Russia. Do none of her sons volunteer to avenge the matron whom Austrian heroes have beaten with rods in the public market-place? No, that would be disagreeable, expensive, and "ridiculous." England cannot help it. she herself is not unstained by cowardice at Malta, and not undisgraced by prevarication anywhere. Her leading men tolerate the trade in cant, perhaps share in it; and if other politicians compete with them in the trade, she cannot help herself; she has no rebuke to put down the dangerous quackery of Repeal in Ireland, or more dangerous nationalism that winks at crop-lifting. She, too, is possessed by the spirit of evil—a mean and low spirit of truckling to bolder diabolisms.

This imperial revolution tends to prevent any real settlement in Europe; but that is a truth not without its consolations. Good only is vital. Evil is mortal, in its nature as well as its effects; its works pass away, its institutions crumble. If the honor and dignity of the house of Hapsburg are disgraced by their present guardianship, so like-

wise are they endangered by it, even to the risk of destruction. If Russia and Austria, England and France conniving, are conspiring to reïnvade Europe with a gigantic political Manicheism, we do not fear it. Good is inextinguishable; the nations will rise again, to do their work once more —and to do it better.

From the Daily News.

FRANCE.

It is difficult to imagine a country so totally devoid as is France of public feeling or of public pride. Any firm-handed despot might humble her before Europe, might use her resources to support any criminal, or superannuated, or imbecile cause; might convert her army into mere police, and take the money of the industrious to pay them. Throughout a land of thirty millions there seems no motive for public conduct acknowledged save fear, or avarice, or the merest selfishness. There is no principle in public men; no force in public opinion. There reigns in the political atmosphere that dead, dark and solemn calm that accompanies or preludes great convulsions, when there is not a light to guide one, nor a breath of wind to move a sail, were one to spread it.

Upon such a world has poor Louis Napoleon been thrown—we say poor, for we profoundly pity him. He has been a twelvemonth at the head of a noble country, and he has not found one principle of government, one public aim, one true support, one genuine friend. The interests of each party that he advanced to power were hostile to him, yet he has shrunk from those which could best have coalesced with him. He was made to consider everything popular and everything liberal as a bugbear, and he consequently flung himself into the arms of parties whose chief hopes consisted in his betrayal.

It certainly was a perplexing thing, for a prince or a president, placed at the head of a French government, to find out support for that government. The popular party was profoundly ulcerated, the middle class terribly frightened, the moneyed class outrageous with losses, of which they flung the entire blame on liberalism and republicanism, instead of attributing them to their own improvidence, selfishness and folly. Loyalty was a sentiment unknown. Even legitimists disown it; what they want is a prince, to stand capital of that column of which they, the aristocracy, form the shaft.

The moneyed class, who were ruined by the republic, and the legitimists, who had been in ruin and disgrace during the last half century, coalesced; and they offered power to whoever would put down republicanism and do their work. They offered it to Lamartine, they offered it to Cavaignac. The one was too foolish, the other too honest, to accept such terms. Louis Napoleon grasped at them. He was elected by them—at least appeared to be so—and he became their tool. They hold him in their hands. They have got an Assembly of their own choosing. For the popular element which was at first sufficiently strong in it, was got rid of by a most foolish conspiracy, which decreased and discredited the liberal ranks and cause. Louis Napoleon has no power to dissolve this assembly. He has no power to govern, save through its majority. And although this majority was obtained from the country under the idea that society and property were in danger, and that the men to be returned should be men who would vote for them at all price, there is no appeal from the extravagant reäction of this majority.

We see what it has done in Rome—something that neither Louis Philippe nor Charles X. could have dared. And what they have done in Rome they will strive to do in France—that is, restore the ancient state of things, the monarchy of the elder Bourbons, the court, the priesthood, the categories of proscription, the censorship of the press, the colleges in possession of the Jesuits. The reäction at Paris arrives at a point quite as extreme as the reäction at Berlin or Vienna. All that is wanting is the scaffold, and that may come.

But although this is the aim of M. Falloux and M. Montalembert, and of the united majority of legitimists and Orleanists, we cannot believe that M. Thiers has put himself at the head of any such crusade. M. Thiers is too much and too indelibly a son of the revolution to commit himself to any such doctrines, or any such party. M. Thiers is essentially a foreign politician; his whole soul is in the interests and advancement of his country abroad. And in order that it may have a commanding position abroad, M. Thiers would perhaps desire to raise to power that party which is strongest in domestic politics. What Lord Aberdeen recommends in England, M. Thiers recommends in France. Lord Aberdeen says, Let us make friends with Austria and absolutism, and by that means appear to support and share in a reäction that we cannot resist. M. Thiers says, The tide of reäction and absolutism is strong; let us join it, and make the most of it.

M. Thiers is, like Lord Aberdeen, biased in no small degree by motives of personal rivalry. The old feud between Thiers and Dufaure, Thiers and Passy, survives. And M. Thiers, who fought the battle of the right of ministers, and not kings, to govern, under Louis Philippe, is most unwilling to give up such a principle to a Louis Napoleon. For the president of a republic to write a letter, disowning all complicity with the unpopular but necessary policy in which his cabinet has embarked, is a trick in M. Thiers' estimation which no public man ought to allow.

Such we believe to be the explanation of M. Thiers' conduct, and we are far from thinking it satisfactory. But it, at least, removes or contradicts the very deplorable supposition that such men as M. Thiers have given their assent, their talents, and their efforts, to a legitimist restoration.

From the New York Tribune.

Los Gringos; or, an Inside View of Mexico and California, with Wanderings in Peru, Chili, and Polynesia. By Lieut. Wise, U. S. N. New York: Baker and Scribner.

The tone of gayety and good-humored persiflage, which has given such brilliant success to several English writers of travels, is almost a new feature in modern literature. With the exception of Beckford's spicy description of his droll experiences in Spain and Portugal, we have had little worth noticing in this kind, until within a comparatively recent period. The instant popularity which has followed the attempts alluded to, has waked up a host of travellers, who feel themselves called to clothe the history of their common-place adventures in the sparkling, gossamer, or, perhaps, gaseous, veil of sprightly romantic embellishment. The apparent ease with which those piquant descriptions are thrown off, has tempted many a conceited itinerant into more perils than those he boasts to have encountered in foreign climes. The book which is so delicious in the reading, has been concocted from the sweat and agony of the author's brain; but the unwary adventurer, who has been enticed into the magic circle, is soon found crushed under the weight of his own stupidity. In this species of composition, more than in almost any other, there is no hope of success except to the writer who combines a genial vivacity, a sensitive, mercurial temperament, a shrewd spirit of observation, with a kaleidoscopic variety and quaintness of expression that always ensures a brilliant triumph in conversation, but which can rarely be woven into the substantial texture of a book. And anything short of triumphant success is dead failure.

The author of this agreeable volume is one of the fortunate persons who can venture on the style, in which he seems so entirely at home, without the shadow of risk. He has only to uncork the radiant champagne of his genius, of which he has specimens of every choice and delicate vintage, and you are regaled with an inexhaustible flow of the exhilarating juice.

The voyage, of which we here have the log-book, worked up into a fascinating tissue of exquisite badinage, genuine humor, and pithy description, led the author into a great variety of scenes, to which his graphic pen has imparted the most felicitous effect. He left Boston at the close of the summer of 1846, in a United States vessel, proceeds to Rio Janeiro, doubles Cape Horn, touches at Valparaiso, cruises along the coasts of Mexico and California, visits the interior, goes to the Sandwich Islands, stops at Nukaheva, explores Polynesia, and returns to this country, after being borne by his noble ship over a space of fifty-five thousand miles. Such a voyage could not fail to open a rich vein of materials to the skilful hand that should be able to work them up with the charms of sparkling, picturesque description. Lieut. Wise has certainly made the best use of his opportunities, and given us a volume which, for its fresh, joyous humor, its life-like naturalness, its brilliant glimpses of character and manners, and its power of expressive word-painting, we have not seen the equal of for a long time, in our critical hunt for readable books. No one who runs his eye over the lively table of contents, can satiate his curiosity without a perusal of the entire volume. We will dip into it at random for one or two sketches, for which our readers will be sure to thank us. They are by no means above the general average of the book.

LIFE IN RIO.

The saloons are always spacious and lofty, with prettily papered walls, and floors of the beautiful, dark polished wood of the country. Nearly all these residences are surrounded by extensive gardens, blooming in bright and brilliant foliage, only matured beneath the burning rays of a vertical sun. There are no springs in Rio, and the grounds are irrigated by miniature aqueducts, led from mountains in the rear; sufficiently large, however, to float in their narrow channels, serpents and many other cursed reptiles, enough to make one's hair stand erect. It is by no means an uncommon occurrence to find the giracca, a venomous snake, insinuating themselves within the sunny marble pavements of steps and porticos; and I was assured by a resident, that one monster, after having some four feet cut off from his tail, ran away with head and remaining half with a most cricket-like and surprising degree of celerity. Indeed, I was myself a witness to the intrusion of an individual of the scorpion breed, who walked uninvited into the saloon, and was on the point of stepping up a young lady's ankle, when, detecting his intention, with the assistance of a servant, he was enticed into a bottle, that he might sting himself or the glass at pleasure. Being somewhat unaccustomed to these little predatory incursions, I was particularly cautious, during the remainder of my stay, to examine every article, from a tooth-pick to the couch, before touching the same. Another approximation to the same genus is the white ant, possessing rather a literary turn, and I was told that it is not unusual for a million or two to devour a gentleman's library—covers and all, in a single night. I have never yet been able to conquer disgust for even docile, harmless, speckled-back lizards; and, indeed, all the hosts of slimy, crawling reptiles, I heartily fear and abhor.

We found the town in a furor of enthusiasm in admiration of the song and the beauty of a French operatique corps. I went thrice, and was well repaid for the dollars, in sweet music of Auber and Donizetti. There were two primas—for serious and comique—both, too, primas in prettiness. The Academy of Paris Music had never, perhaps, seen or heard of Mesdames and her partner, but La Sala Januairo had been captivated with both, and beauty covers multitudes of faults, particularly with men: for what care we, if the notes touch the soul, whether a crystal shade higher or lower than Grisi, or Persiani, so long as they flow from rosy lips, that might defy those last-named donnas to rival, even with the brightest carmine of their toilets.

The theatre itself is a very respectable little place, having three tiers and parquette. The royal box faces the stage, hung with damask. The whole interior of the building was quite Italian; every box railed off with gilded fret-work, and lighted with candles swinging in glass shades. The Brazilians are fond of music, and all the world attended

each representation, including the emperor, empress, and court. As I had, in times past, seen a good deal of Don Pedro, when he was a studious, meditative boy, at the palace of Boto Fogo, I was somewhat curious to observe the effect of old Time's cutting scythe on the Lord's anointed, as well as on the rest of us clay-built mortals. His face and shape of the head had changed very little, but he had grown immensely—tall, awkward, and verging on corpulency even now, though I believe he is only 28 years of age. His Italian wife appeared much older. Both were well and plainly dressed, attended by some half dozen dames and dons of the court.

The curtain rose as the imperial party took their seats, and there were neither vivas, nor groaning manifestations, to express pleasure or disgust, from the audience. All passed quietly and orderly, like sensible persons, who came to hear sweet sounds, and not to be overawed by great people. I made the tour of the donnas through a capital lorgnette; and, although like Mickey Free, fond of tobacco and ladies, I must pledge my solemn assurances, that with the exception of something pretty attached to the French company, there was not a lovable woman to be seen. I doubt not but there are rare jewels to be found in out-of-the-way spots, secluded from public gaze, but it was *terra incognita* to me, and we saw none other than the light molasses-hued damsels, who are fully matured at thirteen, and decidedly *passée* at three-and-twenty. In the present age, it is a questionable inference if saponaceous compounds might not be judiciously used in removing some few stains that nature is entirely innocent of painting; albeit, a lovely Anglo-Saxon of my acquaintance was vastly horrified at thoughts of a friend espousing one of these cream-colored beauties, valued at a *conto* of rais, and shipload of coffee; and assured the deluded swain, with tears in her eyes, that it would require more than half his fortune to keep his wife in soap—supposing she should acquire the weakness or ambition to become enamored of fresh water.

SAN FRANCISCO TWO YEARS AGO.

Our anchorage was near the little village of Yerbabuena, five miles from the ocean, and within a short distance from the Franciscan Mission and Presidio of the old royalists. The site seems badly chosen, for although it reposes in partial shelter, beneath the high bluffs of the coast, yet a great portion of the year it is enveloped in chilling fogs; and invariably, during the afternoon, strong sea breezes are drawn through the straits like a funnel, and playing with fitful violence around the hills, the sand is swept in blinding clouds over the town and the adjacent shores of the bay. Yet with all these drawbacks the place was rapidly thriving under the indomitable energy of our countrymen. Tenements, large and small, were running up like card-built houses in all directions. The population was composed of Mormons, backwoodsmen, and a few very respectable traders from the eastern cities of the United States. Very rare it was to see a native; our brethren had played the porcupine so sharply as to oblige them to seek their homes among more congenial kindred. On Sunday, however, it was not uncommon to encounter gay cavalcades of young paisanos, jingling in silver chains and finery, dashing into town, half-a-dozen abreast; having left their sweethearts at the Mission, or some neighboring rancho, for the evening fandango. Toward afternoon, when these frolicsome *caballeros* became a trifle elevated with their potations, they were wont to indulge in a variety of capricious feats on horseback—leaping and wheeling—throwing the lasso over each other; or if by chance a bullock appeared, they took delight, while at full speed in the *carrara*, in catching the beasts by a dexterous twist in the tail; and the performance was never satisfactorily concluded until the bullock was thrown a complete somerset over his horns. These paisanos of California, like the guachos of Buenos Ayres, and guaso of Chili, pass most of their existence on horseback; there the natural vigor of manhood seems all at once called into play, and horse and backer appear of the same piece. The lasso is their plaything either for service or pastime; with it, the unruly wild horse or bullock is brought within reach of the knife. Ferocious Bruin himself gets his throat twisted and choked, and, with heavy paws spread wide apart, is dragged for miles, perhaps to the bear-bait, notwithstanding his glittering jaws, and giant efforts to escape. Without the horse and lasso these gentry are helpless as infants: their horses are admirably trained and sometimes perform under a skilful hand pranks that always cause surprise to strangers. I once saw a band of horses at General Rosa's quinta, near Buenos Ayres, trained to run like hares, with fore and hind legs lashed together by thongs of hide; it was undertaken to preserve the animals from being thrown by the Indian bolas, and the riders as a consequence lanced to death. But I was far more amused one afternoon while passing a fandango near Monterey, to see a drunken *vaquero* —cattle driver—mounted on a restive, plunging beast, hold at arms' length a tray of glasses brimming with aguadiente, which he politely offered to everybody within reach of his curvetings, without ever once spilling a drop. I thought this better than Camille Leroux in the Polka, or a guacho picking up a cigarritto with his teeth, at a hand gallop! It is remarkable, too, how very long a Californian can urge a horse, and how lightly he rides, even when the beast appears thoroughly exhausted, tottering at every pace under a strange rider, yet the native will lift him to renewed struggles, and hold him up for leagues further. Nor is it by the aid of his enormous spurs, for the punishment is by no means so severe as the sharp rowels with us; but accustomed to the horse from infancy he appears to divine his powers, and thus a mutual and instinctive bond is established between them. The saddles here as well as those along the southern coasts partake in build of the old Spanish high peak and croupe, and are really intended for ease and comfort to the rider. In Chili the pillion is used, a soft material of rugs, smooth and thick, thrown over the saddle frame; but it distends the thighs too greatly. The Californian is both hard and heavy, and murderous to the horse. The Mexican is best, less cumbersome, more elegant in construction, and a great support to the rider. The stirrups of all are similar, weighty wooden structures, and the feet rest naturally in them.

There is nothing either pleasing or inviting in the landscape in the vicinity of Yerbabuena. All looks bare and sterile from a distance, and on closer inspection the deep sandy soil is covered with impervious thickets of low, thorny undergrowth, with none of the rich green herbage, forests, or timber, as in Monterey. The roads were so heavy that the horses could hardly strain nearly knee deep through the sand, and consequently our rides were restricted to a league's *pasear* to the mission, or

across the narrow strip of the peninsula to the old Presidio; but in the town we passed the hours pleasantly, became conversant with the Mormon bible and doctrine, rolled ten-pins and amused ourselves nightly at the monte in the *casa de bebida de Brown;* still there was a great stir and bustle going on. A number of large merchant ships had arrived, bringing the regiment of New York volunteers, and the beach was strown with heavy guns, carriages, piles of shot, ordnance stores, wagons, tents, and camp equipage, whilst the streets were filled with troops, who belonged to the true democracy, called one another Mister, snubbed their officers, and did generally as they pleased, which was literally nothing. However, in due time, they were brought into the traces and properly buckled to their duty, when their services were exerted in planting a battery of long 24-pounders, to command the straits, and their excitable spirits kept under control at their quarters in the Presidio.

This was Yerbabuena as we found it on our first coming—rapidly springing into importance, and bidding fair at some future day, even without the advantages to be derived from the mines, which were then unknown, to become the greatest commercial port on the Pacific.

MANNERS OF NUKEHEVA.

We took a long stroll around the beaches and valleys at the head of the harbor, made a number of visits, then bathed in a shallow, discolored stream of mineral water. The district is not populous, and during our sojourn the king and many of the natives had gone to a high heathenish festival in an adjacent valley, on the opposite side of the island. Since the occupation by the French, perfect amity had existed between the different clans of Nukeheva, where each petty chief and people are independent sovereigns in their romantic and secluded valleys; not so much for mutual friendship existing between them as in hatred to their white visitors. The French seldom wandered to any great distance from their quarters, fearing, possibly, the "Anthropopagian tastes of their cannibalistic brethren."

The women were tall and well-shaped, with very much brighter complexions than the Hawaiians, and, with exceptions of young girls, were all more or less disfigured by the indigo hues of tattoo; the faces escaping with a few delicate blue lines or dots on lips or cheeks. They all seemed complimented, and gave us every assistance in deciphering different signs engraved upon their persons, and one buxom dame, who had a large painting similar to the tail of a peacock spread upon her shoulders, insisted upon doffing her drapery and preceding us, that we might study its beauties with every facility possible!

Many were decorated with bracelets and necklaces of leaves or flowers, and some with anklets of human hair, toe-nails, and other valuable relics. All were perfumed with cocoanut oil, and smeared with another equally odoriferous ointment, which dyed arms and faces a deep saffron. Neither cosmetic was I able to acquire a taste for, after repeated trials; and, indeed, I may admit that I have never conquered a disgust, perhaps engendered by too nice a sense of perfume.

From a number of unmistakeable signs and expressions, I presumed the *Frances* were not entirely beloved, even by the women, although the men deigned ludicrous attempts in mode of beard, moustache, shrug of shoulders, and other little grimace, to copy French dress and manner.

After bathing, we reclined on the thwarts of an immense war canoe that was hauled upon the beach, capable of holding at least fifty paddles, and amused ourselves watching a score of young girls swimming in the bay; they swam like fishes, but as there was no surf or rocks, I had no means of determining what novel or extraordinary feats they were able to perform; they were quite skilful little fisherwomen, and procured for us a cocoanut-shell full of delicious oysters—no bigger than shilling pieces—which served to pass the time until we adjourned to the king's house.

It was rather a modern structure, of roughly-laid stones and boards, built by the French, though falling to decay. There was but a single apartment of tolerable size; floor and walls were strewn with mats, stools, a couple of bedsteads, spy-glasses, fowling-pieces covered with rust, spears, nets, calibashes, rolls of *tappa*, war conches, whales' teeth, circular crowns of cocks' feathers, beside an infinite variety of serviceable and useless trumpery, scattered indiscriminately around.

Coiled up on a low, beastly collection of mats and *tappa*, was a repulsive object, half dead with some loathsome disease, and drunk with *arva*—he was the chief's brother, and was expected to die shortly, or be killed on the return of his sovereign—a custom strictly observed with invalids and old decrepid persons.

Within a stone's throw of this habitation was another nearly completed, in native design. The foundation was raised two feet by a platform of large, round, smooth stones. The building itself was in shape of an irregular inverted acute angle, or trapezoid, at the ends, with the legs slightly inclined outwardly, and resting on the foundation. Large upright shafts of polished red wood supported roof and sides, which were nicely formed of frames of white poles, lashed securely and neatly together by braids of party-colored sennit, and thatched evenly and tastefully over by the spear-shaped leaves of the pandannus, leaving the front of the dwelling open for light and air. It presented a deal of ingenuity and nice mechanism in the design and construction.

The French allow the king sixty dollars a month, and I should say, from the careless appearance of his household, that he made a bad use of it; besides, he was addicted to *arva*, which my friend assured me was a shade worse for the stomach than Prussic acid. I returned to the frigate in the evening, with a party planned to visit the Happar Valley, whose beauties we had heard much extolled, on the following day.

The title of the book—Los Gringos—is rather cabalistic at first sight, but we see its appropriateness when we are informed that it is the epithet—and rather a reproachful one—used in California and Mexico to designate the descendants of the Anglo-Saxon race with a signification somewhat similar to Greenhorns in modern parlance, or Mohawks in the days of the Spectator.

From the Foreign Quarterly Review.

Sommer Reise—Eine Wallfahrt (Summer Journey, a Pilgrimage), by FREDERIKE BREMER. Brockhaus: Leipzig. Williams and Norgate, London.

MOST people will admit that a very disagreeable cold-watery kind of sensation is produced, when, on entering a room which you thought to see filled with "old familiar faces," you unexpectedly find yourself in the midst of a circle of strangers.

Ought it not, therefore, to be very pleasant, when we had reason to expect a group of new acquaintances, to meet with none but old friends whom we have known for years? This agreeable surprise Miss Bremer has prepared for us in perfection. The good, clever, stout-hearted matron—the rational, cheerful, nay, *jolly* old maid—the fair and somewhat moonshiny young one—the gloomy, mysterious stranger who turns out to be a long absent son of the house, who has been lost, or at least mislaid, for many years, but whom we know the moment he steps across the threshold, though his nearest relations don't—the large circle of brothers and sisters whose names (not having studied the noble science of phreno-typics) we can by no possibility remember—here they are all again assembled for a family festival, as we have so often met them before in Miss Bremer's productions; we need not be at the trouble of introducing one of them.

But, if in the so-called *novel* part of the "Sommer Reise" we find little novelty, we have, at all events, in the introduction, something surprising. What shall we say to this fantastic rhapsodical prelude to an entertainment so simple—not to say insipid? Is it that

> She on honey-dew hath fed,
> And drank of the milk of Paradise?

Or if not, under what influence has it been composed? It commences in this fashion.

What I love—what since my youth up I have loved more than all created things—has a beautiful countenance. Not beautiful after the Greek model. No! His features are nothing less than regular. Not smilingly beautiful. No! Although the most beautiful smile beams across them, yet their expression is serious. It casts dark glances, and has unlovely scars and wrinkles. But I love even these. Why? I know not. Love is of a sunny nature; it kisses unlovely scars, and adorns defects with the blossoms of tenderness. Tall is the form of my beloved—great are the contrasts that exhibit themselves in him; from his feet which the waves of the Baltic bathe, and flowery meads caress—to his brow crowned by jagged icy rocks over which flame the Northern lights.

At his feet will I sit and listen to his words, like a child at the feet of its mother.

And sublime are thy lessons, Svea—my mother land, my father land! The sea is not so deep—the sunbeams are not so warm—the roses are not so sweet, &c. &c.

Dear reader, can you guess what all this means? Or do you "give it up?"

The introduction commencing thus auspiciously is no less than thirty-seven pages long; but, fortunately, in the intervals of such flights as these, the authoress does occasionally set foot on the ground, and then she favors us with agreeable lightly-touched sketches of Swedish scenes, dashed off, we may suppose, as the steamer passes up the gulf of Bothnia. From these we select a few passages.

Along the coast of Sweden lies a series of little towns—daughters of the sea from which they derive their support. * * * * * The Swede cares not to adorn the outside of his house: his garden, if he has one, is not filled with blooming flowers, as in the lands of the south. He has, perhaps, for good reasons, no great confidence in the sun, and in the friendliness of the powers of nature. He objects, too, decidedly to all unnecessary trouble; and he has a contempt, which only goes a little too far, for many of the conveniences and luxuries of life. The inside of the house is truly his home—and this is more evident in the small towns than anywhere else. The streets are empty, and on the market-place, before the town-house, there are few passengers but four-footed ones, and the grass is growing on the uneven pavement; but out of the little windows of the little houses, from between white curtains, and from behind blooming geraniums and balsams, handsome inquisitive faces—men, women, children, cats, and dogs, look eagerly at the passing traveller. In the evening, too, when the candles are lit, through the windows veiled by no envious rolling blinds, there may be seen a complete gallery of pretty little domestic pictures. Life is very quiet in these small towns. Coffee-drinking parties and clubs make little disturbance, and only when there is a ball in the town, may one or two carriages be seen driving about to pick up the ladies. One decided advantage these insignificant towns have over both London and Paris—they have no beggars. The Swedish towns are poor, but they know no mendicancy.

Smaland is a land with a rich variety of hills, and valleys, and small lakes; rather gloomy towards the north, but southward, towards Blekinger, more pleasant, and inhabited by a lively, witty, contented population, so active and ingenious, that it is said—"Set a Smalander upon the roof of your house, and he will manage to get his living." This character is most strongly marked in the distant wooded districts; the forest is the workshop, and, at the same time, the storehouse of the countryman. The juniper-tree and the bilberry yield him their fruit; he brews drink from them, and makes jam; he mixes their juice with his salt dry food, and remains healthy and cheerful over the work that seems a mere pleasure to him. He sings to wile away the time, while his lonely charcoal-kiln glows and burns in the recesses of the wood, and when he *tars the valley*, as it is called, it is a grand festival.

The process of *tarring* the valley consists, we are told, in dragging into it a number of roots and stumps of trees to be kindled in order to obtain the tar. This is a grand occasion of rejoicing among the country people, who assemble in the burning valley to eat and drink and keep up the fire. The people of Smaland are said to have a tinge of romance and enthusiasm in their character corresponding with the wildness of their scenery; and this district has been tolerably fertile in distinguished men, amongst whom we may mention "Linnæus, the King of Flowers, who, when the sceptre fell from the hands of Charles the Twelfth, arose to give new splendor to the name of Sweden, and to extend his flowery sceptre over the earth;" and one or two others less known beyond the limits of their country than they deserve to be.

Here the peasant Horberg, in the intervals of tilling his fields and driving home his hay, painted altar-pieces which are still highly valued; and here

was born Hakan-Syogren, also the son of a poor peasant, who by his own exertions raised himself to a high academical rank, and by the most rigid economy accumulated a fortune of which he made the noblest use; who, old and gray, and looking like a moss-grown rock, still retained a heart full of life and warmth, and who, *with his money-box beneath his feet*, [Query, is this intended for a figure of speech?] assembled round him a troop of promising but poor young men, whom he supported with its contents—a faithful representative of the character of the people of Smaland, and a living proof of the great things that may be achieved by paying attention to what is small in time—in money, in everything. * * * * Northwards from Smaland rises East Gothland, one of the largest and most fertile districts of Sweden, and forming with West Gothland the very kernel of the land of the ancient Goths. Deep, dark forests meet us here, which in the heathen—nay, long after, in the Christian time, no one entered without specially commending his soul to God. Memorials of murder are seen the whole way, on trees and stones, and the silence and profound solitude of the woods, and the distance from all inhabited places, awaken uncomfortable thoughts.

In East Gothland the Götha Canal, "the blue ribbon of Sweden," connects the North Sea with the Baltic. Northward from West Gothland lies Bohuslän, formerly Alfhem, the home of the Vikingr, and whose inhabitants, for ages after the Vikingr had ceased to exist, still bore a very indifferent character among their neighbors. Here Sigrid Storroda laid her plan of vengeance against "the little king," her wooer; and it is said there is still a certain hardness and ruggedness in the character of the inhabitants which are symbolized in that of the physical features of their country. Out of the blue waves rise granite rocks, which resemble a stormy sea suddenly stiffened into ice. In the mountains are found vast gloomy glens, and caverns, and heaths; and here and there, like oases in the desert, a few green fruitful valleys. The sea is the source of all the riches of the country—the field from which yearly millions of silver ears are reaped.

On the coast of the Vikingr now stand only fishermen's huts, and while the man is out contending with the waves for a subsistence, the wife cultivates a little field of potatoes among the rocks, over which her children and her goats are climbing.

West Gothland, Dalsland, and Wermeland surround the Wener Lake, the great inland sea of Sweden, the most important for her domestic trade, and celebrated for the conflicts that have formerly taken place upon its shores. Proceeding northwards from home, we come to Svea, the "people's land," the *Manhem*, or "Home of Men," where, according to tradition dwelt the original tribe of the Swedes, as to the south abode that of the Goths. In this region are the largest and oldest mines; for here central Sweden is encircled by her girdle of iron:—

Iron ore forms the ground upon which the houses stand, from which the springs flow, on which lie the poor and unproductive fields. Poor and scanty, therefore, is the nourishment of the people, and pale poverty too often has her seat beneath the turf-covered roofs of the low huts. And yet from the poorest districts of all, from Westmanland and Dalarne, proceed the strongest men.

We should have been glad to have had some further explanation of this fact, if it be one, for we cannot feel altogether satisfied with that Miss Bremer offers. "So great is the power of spirit over nature! So little can the earth, the old giantess Ymer, effect against the struggling, energetic will of man." Does she mean that people can grow strong, and large in body, whether they are fed or not, if they will only, as the lady in "Dombey" says, "make an effort?"

Eastward from this province lies the fine Malar valley, containing the Malar Lake, with which, according to tradition, all the flowing waters in Sweden are connected: and at its effluence, in the Gulf of Bothnia, stands the royal city of Stockholm.

The approach to Stockholm from the Baltic lies along a far-extended coast of broken rocks, and countless larger and smaller islands and "holms," forming on all sides innumerable passages and bays, within which are continually opening inviting little prospects, of which one would gladly take a nearer view, but which are immediately succeeded by some other just as attractive. Many of these "holms" look like green bouquets flung upon the surface of the sea; sometimes they are rocks, but never quite barren. Fir woods clothe the heights, and groves of brightest green gleam forth amidst granite rocks. At the foot of the mountains, on the green shore, stand pretty, neat cottages, the abodes of fishermen—little fishing-boats, with their sails furled, lying tranquilly before them on the water. Higher up, on the terraces, we see elegant country-seats and summer-houses, lying embowered in trees; and the nearer you come to the city, the higher rise the buildings, and more closely throng the mountains. They terminate at length in a castle—a granite fortress, with a forest of pines crowning its battlements; but suddenly the mountains open, and there lies Stockholm in a magnificent amphitheatre, with its royal palace, its churches, and its mass of houses, encircling the wide harbor, with the flags of all nations flying on its bosom.

Following thus the shores of the gulf to where they stretch towards Finland, we arrive at Tornea, where people are in the habit of going to make calls on the "midnight sun," his "*salon de reception*" being a certain hill near the Russian frontier line—which, it seems, is not beyond the reach of toll-bars, though lying in the everlasting solitude of the measureless primæval forest, "watered by nameless streams, and inhabited by plants and animals unknown to the rest of the world."

Here, nevertheless, we find the personages of the novel, and others, forming comfortable picnic parties; and as there is, we suppose, no great probability that many of our readers will follow their example, (at least, during the present year,) we will turn to Miss Bremer's sketch of the scene.

On the top of the hill the ground was tolerably flat. Pines and birch-trees grew on it, and rich

masses of heath showed themselves between rocks and trees. There were about a hundred persons assembled in various groups, most of them well furnished with hampers of wine and provisions. Various languages were heard—Swedish, Finnish, Russian, German, and French. The prospect was boundless over the dark wooded region, on which the sun shone without seeming to light it. Softly glowing, but without rays, it stood just over the horizon, and flooded the figures on the hill with purple light. Soon this was overshadowed by a cloud, and here and there on the horizon could be distinguished rising columns of smoke, that marked the spots where the cultivation of the desert had begun, and the spirit of agriculture had penetrated beyond the polar circle. The night was warm, tranquil, and pleasant, and the mountain now gleamed all over with little fires, kindled to drive away the gnats. All seemed to invite to the calm enjoyment of this great festival of nature. * * * Now it was twelve o'clock, and at this moment the cloud rolled away, and the sun issued forth in full splendor.

The Frenchman of the party saluted its appearance by firing a pistol in the air; a German princely pair, who had come thither on a wedding tour, by a conjugal kiss extraordinary; and the company in general, by a grand attack on the hampers brought with them with a precaution by no means unnecessary, as at the only house of public entertainment within any possible distance the hostess, being also chief medical officer of the district, had absented herself to perform a surgical operation; so that all the entertainment the house afforded was a place to cook in, if anything could be had to cook.

We take it for granted that the authoress has herself made this excursion, and though she has introduced her fictitious personages into the scene, that it is faithfully described. We cannot, however, help regretting that, instead of a very flimsy and insipid *nouvellette*, she did not give us a simple account of her "Summer Journey," which, with her thorough knowledge of the country, and usually pleasant style, could hardly have failed to make an agreeable book. As it is, we have felt some disappointment, which we have expressed with less hesitation, from having had, on former occasions, a more welcome duty to perform. The great charm of Miss Bremer's earlier works is their truth, freshness, and domestic simplicity. Let her beware of affectation and mannerism.

PERSIA AND TURKEY.

A CURIOUS and dramatic scene is reported to have lately taken place at the court of Persia.

The young Shah has been passing the holy month of Ramazan, which happens this year to coincide with the dog days, in a spacious garden not far from Teheran. The envoy of a great Christian sovereign having demanded an audience of his majesty, an hour was appointed for the ceremony. His Excellency, on arriving in due season at the royal encampment, was ushered into a tent, where he reposed a moment, while his arrival was announced to the Mahometan successor of Darius and Xerxes. Scarcely had he taken a seat, when his ears were assailed by the sound of repeated heavy blows, mingled with the most piteous cries of terror and agony. Scarcely had he time to comprehend that a grand public execution was the cause of these distressing sounds, when he was seized by the Shah's attendants, and hurried forward to the royal presence. On his passage a greater and more revolting shock awaited him. Executioners dragging the yet palpitating trunks of eight headless victims, decapitated before the Shah, met him in his path, and rudely shoved him aside, to make way for their hideous train of carnage and mutilation. On reaching the court circle, pale, agitated, and confused, he remained for some seconds in an attitude of speechless horror. The Shah, with an air of composure which would have done him honor on the field of battle, inquired if the envoy was unwell; and then, for the first time, in language of just indignation, learnt what even the most despotic court of Europe would think of the bloody and barbarous reception just given to its representatives. Besides the appearance of insult offered to a friendly sovereign, no light shade of odium was cast upon the throne, when thus converted from a seat of judgment and mercy into the shambles of a butcher. It is rumored that the king of kings, abashed by so well deserved a reproof, hung his head in the silence of youthful shame, and that the idignant envoy, on repeating his complaint to the prime minister, received the consoling assurance that he had probably earned by twenty minutes of annoyance the satisfaction of putting an end to a barbarous and hateful practice, which, though belonging to the good old times of Persia, was not the less a scandal to the age and a dishonor to the crown. There is a deep moral in such accidents—the finger of Providence appears in them. It is not to be supposed that the court of Persia sought purposely to insult a great power, by making its representative the unwilling eye-witness of a brutal spectacle of blood. No one, perhaps, thought of the indecency of coupling a public execution with the audience of a foreign ambassador. The Shah, from a mistaken sense of duty, or an hereditary passion for executions, having ordered that the supposed criminals should be tortured and beheaded before him, the audience in question was probably appointed for the same hour, from a mere motive of convenience, without any further design or consideration. But the diplomatist was naturally disturbed by so great an outrage to his sense of propriety, and, unrestrained by the stiffness of a lace coat, the man's heart leaped unconsciously forth, and for once at a royal audience the plain, unpremeditated truth was spoken out with becoming freedom. Prince D. had a right to take offence, and, at a distance of many hundred furlongs and versts from the scene, there was one to whom he could appeal for redress, and who was not to be offended with impunity. It is difficult to bring such actions into comparison with each other, and not at the same time to contrast them mentally with the improvements, whether in matters of administration or of policy, which are daily observed in Turkey. Far from presiding in person at the solemn expiation of crime by personal suffering, the sovereign of Turkey issues with reluctance his warrant for a public execution, and allows no capital sentence to be carried into effect without an open trial, a legal conviction, and the sanction of his supreme council. He has abolished torture—he has forbidden the punishment of the bastinado, and the measures of his government tend continually to an equal administration of the laws

to all classes of his subjects. The same benevolence appears in his external policy. Though united by ties of amity and mutual good will with all the powers of Europe, he joins with no alliance of sovereigns in a league against constitutional principles and the progressive improvement of society; he maintains order in his own dominions; but even in the performance of that supreme duty, he tempers justice with mercy.—*London Chronicle.*

"CAPRICES" is the name of a volume of poems published without the author's name, by Robert Carter & Co., of this city. We have looked it over with more than usual interest, because we have found more in it than in most of the volumes of respectable poetry which are laid on our table—more thought, more spirituality, and a deeper insight into nature. We have neither space nor time for anything like an analysis of its merits and blemishes—the latter are mostly verbal—but we give our readers what they will probably like better, a sample of the collection:

THE GLOWWORM.

Deep within the night,
Toiling on its way,
With its feeble lamp
Giving out a ray.

Close about its path
Sombre shadows meet,
And the light is cast
Only at its feet.

Castle-top and grange
Off within the dark;
What are they to it,
Groping by its spark?

Castle-top and grange,
Orchard, lane and wood,
Human homes asleep,
Precipice and flood.

What are they to it,
Groping by its ray;
God hath given light,
Light for all its way:

Light to know each step
Of the toilsome ground;
Wherefore should it pry,
Questioning, around?

* * * *

In the night of time,
Toiling through the dark,
Reason's feeble lamp
Giveth out its spark.

Close about my path
Hidden wonders lie,
Mysteries unseen,
Shapes of destiny,

Beings of the air,
Shadowless and weird,
Looking upon me,
Uttering unheard,

Sad and warning eyes,
Pleading from the past,
From the years to come
Mournful glances cast,—

What are they to me,
Toiling towards the day;
God hath given light,
Light for all my way.

N. Y. Eve. Post.

A WOMAN'S PLEA FOR MERCY.

THE CONDEMNED POISONER, CHARLOTTE HARRIS.—Some charitably disposed inhabitants of Taunton recently memorialized the Home Secretary to spare the life of this convict, condemned for poisoning her husband, and now awaiting her accouchement, previous to the sentence of the law being carried into effect. Sir George Grey has officially announced his regret that the case presents no grounds that warrant his interference with the due course of law. The prisoner is expected to be confined every day, and as soon after as possible the extreme penalty of the law will, it is stated, be carried into effect.—*Daily News.*

STILL keep the night-lamp burning,
I must have constant light;
Those horrors, else, returning,
Harrow mine inward sight:
The drop—the noose—each feature
Of that bad scene I see,
Where they bear forth yon creature
From childbed to the tree.

Her pinioned arms deny her
Her infant's last embrace;
Since they may not untie her,
They lift it to her face.
And then—yes, I should banish
Such fancies overwrought,
But they refuse to vanish,
Those spectres of my thought.

'T is true, if aught could smother
Pity, it were her crime;
But I shall be a mother
Too, in a little time.
To think if I were lying,
Foretasting every pang,
Counting each moment flying,
And, after all, to hang!

To feel each cordial proffered
My sinking frame to prop—
Was succor only offered
To save me for the drop!
Better at once to end me,
Than, like that hapless wretch,
To soothe, sustain, and tend me,
And nurse me for Jack Ketch!

The law, with strange compassion,
Her unborn babe reveres,
Whose mind despair will fashion,
And agonizing fears:
Preserved by mercies tender,
An idiot but to be;
Nay, what these thoughts may render
My own, disquiets me.

Mother and queen, forget not
Pardon is in thine hand;
For woman's pity, let not
This hanging shame our land;
But cause the mob ferocious
The spectacle to miss,
Inhuman and atrocious,
Of butcher-work like this.

Punch.

FATAL FACILITY; OR, POISON FOR THE ASKING.

NEW BOOKS.

The Women of the Old and New Testament. Edited by William B. Sprague, D. D. New York: Appleton & Co.

This is by far the most superb gift book we have yet seen, and of the greatest intrinsic value. We presume that its costliness will place it beyond the reach of many; for a work so richly bound, and so profusely illustrated with fine engravings from original designs, must necessarily be expensive. But whoever can afford the outlay will turn to this as an appropriate and worthy token of pure affection and refined taste. The volume is embellished with eighteen exquisitely finished engravings, being the ideals of so many female characters mentioned, with more or less minuteness of narrative in the Holy Bible. The engravings are all from designs by Staahl.

The reading matter is not of an ephemeral character. The pen-and-ink portraits are life-like, forming our judgment from the Scripture narratives, and skilfully wrought out. The Rev. Dr. W. J. Kip furnishes an article upon the Virgin Mary, which opens the volume, and the other contributors are Dr. E. Mason, the editor, the Revs. C. Wadsworth, E. N. Kirk, A. A. Wood, Drs. Halley and Beman, Bishops Henshaw and Hopkins, Drs. Todd, Cox, Murray, and others. We can assure our readers that they will find in this volume specimens of the most chaste and finished style, and delineative passages of the most exquisite character. He who presents to mother or sister, wife or daughter, loved one or friend, this substantial and elegant volume, will not only indicate his confidence in the refined and elevated taste of the recipient of so handsome a gift, but will aid in giving even a still loftier tone to taste, by mingling with its gratification the strength and purity of earnest moral and religious sentiment.—*Com. Adv.*

Lectures on Subjects connected with Literature and Life, is the title of an exquisitely printed little volume, by Edwin P. Whipple, published by Ticknor & Co., of Boston. The popularity of the author as a lecturer will secure for the work an extensive sale in New England, but it has claims so much beyond the ordinary range of similar books, that we desire to commend it to the reading public around us, as a very ingenious and suggestive work. The subjects treated by the lecturer are, "Authors," "Novels and Novelists," "Wit and Humor," "The Ludicrous Side of Life," "Genius," and "Intellectual Health and Disease." In discussing these topics, Mr. Whipple analyzes many of the essential principles of criticism, defines the characteristics of literature, and vindicates intellectual power with sagacity and eloquence. He takes the highest moral view of authorship; and gives admirable hints for the cultivation of a discriminating taste in reading. The style of these essays is vigorous, pointed and lively. There is a spirited rhetoric in the mode of handling each subject, at once fascinating and impressive. We do not agree with all the writer's positions; but we sympathize heartily in the manly intelligence and independent philosophy of his tone; and feel indebted to him for one of the most charming belles-lettres volumes of the day.—*N. Y. Eve. Post.*

From the National Era.

We fear the rather unpromising title of this volume may have the effect to deter a class of readers who hold to the maxim that "words are things," and with whom the word "lectures" awakens associations of inanity and tediousness, pompous displays of superficial knowledge, oracular utterances of commonplaces, and literary larcenies in comparison with which hen-roost robbery is reputable, from the pleasure of perusing one of the most brilliant and fascinating volumes which has ever issued from the American press. It consists of six lectures, or rather essays, on Authors in their Relation to Life, Novels and Novelists, Wit and Humor, The Ludicrous Side of Life, Genius, Intellectual Health and Disease. In treating these subjects, the author has not inflicted upon his readers a single page of dulness. His style is remarkably direct and energetic, a fitting medium of his clear and sharply defined conceptions—terse, epigrammatic, brilliant, rising at times into true eloquence. But to commend his essays as specimens of fine writing merely, would do him serious injustice. They are characterized by shrewd insight, practical wisdom, and, as the necessary consequence of the utter absence of cant and sentimentalism, a hearty, healthy tone of sentiment and feeling. His ridicule of the unmanly puerilities of literature, and his contempt for shams, false pretences, affectations, and sentimentalisms, remind one of the savage mirth of Longfellow's Northern Jarl, whose

> —— loud laugh of scorn
> From the deep drinking-horn
> Blew the foam lightly.

The concluding essay, on Intellectual Health and Disease, touches with no gloved hand the peculiar and besetting sins of the northern and southern sections of our country—the Yankee's conceit and the Southerner's pride. He says of the Yankee, that "he has a spruce, clean, Pecksniffian way of doing a wrong, which is inimitable. Believing, after a certain fashion, in justice and retribution, he still thinks that a sly, shrewd, keen, supple gentleman, like himself, can dodge, in a quiet way, the moral laws of the universe, without any particular pother being made about it." He illustrates this by the preaching and practice of Yankeedom in respect to the Mexican war. * * * * * *

We hazard nothing in predicting for these lectures a wide popularity. They will entitle their author to the same rank as an essayist which he already occupies as a reviewer and critic.

J. G. W.

Orations and Occasional Discourses. By Rev. George W. Bethune, D. D. New York: G. P. Putnam.

Every admirer of true and fervid eloquence devoted to practical and elevated purpose will hail this volume with unqualified pleasure. For ourselves we have often regretted the ephemeral form in which alone the orations of Dr. Bethune, and others whom we could name, were to be obtained. This elegant volume meets our want and a general desire, and oftentimes will the intelligent young man and the man of more matured experience take it from the library shelf and refresh the intellect, and revive the heart with its perusal. The discourses are twelve in number, including the noble oration on "The Claims of our Country upon its literary Men," delivered during the present year before the Phi Beta Kappa society of Harvard University.—*N. Y. Com. Adv.*

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Illustration.—Fatal Facility; or Poisons for the Asking. *Child.*—"Please, Mister, will you be so good as to fill this bottle again with Lodnum, and let mother have another pound and a half of Arsenic for the Rats (!)"

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Short Articles.—Houses and Chinese in California, 450.—Caprices, 476.—Women of the Old and New Testament; Mr. Whipple's Lectures; Dr. Bethune's Oration, 479.

Prospectus.—This work is conducted in the spirit of Littell's Museum of Foreign Literature, (which was favorably received by the public for twenty years,) but as it is twice as large, and appears so often, we not only give spirit and freshness to it by many things which were excluded by a month's delay, but while thus extending our scope and gathering a greater and more attractive variety, are able so to increase the solid and substantial part of our literary, historical, and political harvest, as fully to satisfy the wants of the American reader.

The elaborate and stately Essays of the *Edinburgh, Quarterly*, and other Reviews; and *Blackwood's* noble criticisms on Poetry, his keen political Commentaries, highly wrought Tales, and vivid descriptions of rural and mountain Scenery; and the contributions to Literature, History, and Common Life, by the sagacious *Spectator*, the sparkling *Examiner*, the judicious *Athenæum*, the busy and industrious *Literary Gazette*, the sensible and comprehensive *Britannia*, the sober and respectable *Christian Observer*; these are intermixed with the Military and Naval reminiscences of the *United Service*, and with the best articles of the *Dublin University, New Monthly, Fraser's, Tait's, Ainsworth's, Hood's*, and *Sporting Magazines*, and of *Chambers'* admirable *Journal*. We do not consider it beneath our dignity to borrow wit and wisdom from *Punch*; and, when we think it good enough, make use of the thunder of *The Times*. We shall increase our variety by importations from the continent of Europe, and from the new growth of the British colonies.

The steamship has brought Europe, Asia and Africa, into our neighborhood; and will greatly multiply our connections, as Merchants, Travellers, and Politicians, with all parts of the world; so that much more than ever it now becomes every intelligent American to be informed of the condition and changes of foreign countries. And this not only because of their nearer connection with ourselves, but because the nations seem to be hastening, through a rapid process of change, to some new state of things, which the merely political prophet cannot compute or foresee.

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Washington, 27 Dec., 1845.

Of all the Periodical Journals devoted to literature and science which abound in Europe and in this country, this has appeared to me to be the most useful. It contains indeed the exposition only of the current literature of the English language, but this by its immense extent and comprehension includes a portraiture of the human mind in the utmost expansion of the present age.

J. Q. ADAMS.